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ABSTRACT

This book offers eight papers presented by specially invited delegates. The papers and their authors are as follows: "Dyslexia and Its Consequences in the Life of Dyslexics" (Hanna Jaklewicz); "Visually Related Reading Problems--Diagnosis and Treatment" (Ivar Lie); "How to Prevent Vision Problems among Children in China" (Chengfen Zhang); "Four Meanings of 'Meaning' and Reading Achievement of 'Good' and 'Bad' Pupils" (Joanna Rutkowiak); "Scientific and Methodological Requirements to the Literature for Adult Education" (Zaitsev Yuri); "The Idea of Childhood in Astrid Lindgren's Early Stories" (Hieronim Chojnacki); "Notion of Goodness and Evil in 'Fairy Tales and Stories' by H. C. Andersen in the Light of Contemporary Christian Theodicy" (Magdalena Lipinska); and "Test Measuring of Tropes Understanding in Teaching English as a Second Language" (Hristo Kaftandjiev and Fely Stoyanova). (SR)

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ASPECTS ON LITERACY

Britta Ericson, Editor

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ASPECTS ON LITERACY

Selected Papers
from
the 13th IRA World Congress on Reading

Britta Ericson, Editor

Linköping Studies in Education and Psychology No. 34
Linköping University, Department of Education and Psychology

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Abstract
This book includes eight articles. The content covers a variety of aspects in the field of reading e.g. Dyslexia and Its Consequences in the Life of Dyslexics, Visually Related Reading Problems, Scientific and Methodological Requirements to the Literature for Adult Education, literary appreciation of works by Astrid Lindgren and H.C. Andersen and Test Measuring of Tropes Understanding in Teaching English as a Second Language.
The authors come from Bulgaria, China, Poland, Russia and Norway. They were specially invited to present papers at the 13th IRA World Congress in Reading in Stockholm, Sweden July 3–6 1990.

Keywords: adult education, dyslexia, literary appreciation, Astrid Lindgren, H.C. Andersen, reading achievement, reading difficulties, vision problems, first foreign language, English language, theodicy.

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Introduction

Each second year the International Reading Association arranges a world congress. Sweden had the honour of being chosen as the host country of the 13th World Congress on Reading, which was held in Folkets Hus, Stockholm, July 3–6 1990. *Sharing the Future: Literacy around the World* was the theme of the congress, which attracted more than thousand delegates from all parts of the world.

The congress gave an opportunity for us to present Swedish ways of working in the field of reading within and outside Sweden. At the same time our intentions were to make the congress as international as possible.

During the time of the congress Europe was still politically and technically divided into two parts. For several reasons, therefore, it was not easy for citizens of East European countries to attend a professional congress in Stockholm. However, we thought it valuable to be able to share results of research and thoughts about reading with people from these countries. We worked to fulfil our intentions. As a result some East Europeans were specially invited to present papers at the 13th World Congress on Reading.

In Sweden, as in many other countries in the Western World, you will find divergent opinions concerning the relation between vision problems and reading. Therefore we arranged a special institute on the subject. We found it of importance to learn from others about this problem area and invited speakers from both the West and the Far East.

The articles you will find in this book consist of papers presented at the 13th World Congress on Reading by some of our specially invited foreign delegates. For the reader interested in the field of reading the content will be similar to a Swedish Smörgåsbord. There will not be one dish to taste but many. You will be able to consume aspects on eg. dyslexia and its consequences in the life of dyslexics, visually related reading problems, as well as scientific and methodological requirements for literature for adult education, and the idea of childhood in Astrid Lindgren's early stories.

To avoid an unintelligable English Ulla-Britt Persson, FK, Linköping University has checked the language. My sincere thanks!

The main Swedish contributions to the congress – papers concerning Swedish ways of working in the field of reading – have earlier been published under the title *Swedish Aspects on Literacy – Selected Papers from the 13th IRA World Congress on Reading*.
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Dyslexia and Its Consequences in the Life of Dyslexics

Hanna Jaklewicz
University of G'dansk - Poland

Studies on the fate of dyslexic children taken up in 1969 were conducted over 20 years. At first the studies had an epidemiological character.

The sample comprised 390 children selected at random from a total of 9.000 fourth-year-elementary school children living in Gdansk, their average age 10.9. The ratio of boys to girls was 103 to 100. The control group consisted of children without reading and writing difficulties, selected from the random group. The parents' educational level, family structure, socio-economic background and the child's position in the family were approximately similar in the dyslexics and control groups compared.

The diagnosis of dyslexia was preceded by investigations comprised in three stages, namely:

a) medical interview in a form specially devised for this purpose, psychiatric, neurological, ophthalmologic, and phoniatric examinations.
b) pedagogic assessment of reading and writing
c) psychological tests

The aims of the first investigations conducted in 1969 may be formulated as follows:

1. To assess the frequency of occurrence of dyslexia in the representative group
2. To find out about the character of reading and writing difficulties and about factors causing these specific disabilities.

The frequency of dyslexia and dysorthographia established after epidemiological studies in the representative group amounted to 13,1 per cent.
In some other countries this ratio amounted to 0,3 to 15 per cent. This difference may result from the lack of uniform criteria for dyslexia and dysorthographia, from different concepts regarding pathogenesis of these difficulties and a different language structure.

In my theoretical considerations I assumed that dyslexia and dysorthographia were caused by a deficient development of some cerebral functions. I sought for these causes among damaging factors occurring during pregnancy, birth or early childhood.

Study of medical data, psychologic and pedagogic examinations revealed essential differences between the clinical pattern of specific learning disabilities in children who had suffered brain damage during gestation or birth, and those who had suffered later. Children with prenatal or perinatal brain damage showed disorders in all developmental functions and lateralization. In this group, specific reading difficulties (dyslexia) were coupled with writing difficulties (dysorhtographia).

Children who had suffered cerebral damage between the ages of 3 and 6, only showed disorders in auditory percepto-motor functions, whereas specific reading difficulties were absent. Only writing disabilities, characterized by dysorthographia, were noted. In children from families with specific learning disabilities, dyslexia and dysorthographia appeared jointly. The degree of these difficulties was lower than it was in the other groups, as evident from the number of writing and reading errors in either of the group.

Analysis of the material investigated has shown that pathological factors operating during gestation or delivery, cause extensive damages and disorders in the process of programming cerebral organization. Cerebral injury suffered in a later developmental phase damages mainly those functions that are in a state of intensive development. These results are conformable to Towbin's conception. The initial studies conducted in 1969 can be summed up as follows:

1. the frequency of dyslexia and dysorthographia in the representative group was 13,1 per cent
2. the character of pathogenic factors determines the clinical pattern of specific learning disabilities

Follow-up studies were carried out after 10 and 20 years and completed in 1989. I emphasize that these studies were conducted on individuals aged 20,9 and repeated when these were 30,9 as far as, at that age, their education, their social position and characteristic features of personality can be assessed. The aim of these longitudinal studies was:

1. to follow up the natural development of children with dyslexia and dysorthographia
2. to point out the developmental differences between dyslexics and children free of specific difficulties in reading and writing.

Follow-up has shown that reading and writing disabilities persist and maintain their specific character. The persistence of these difficulties contributes to general learning difficulties. These studies showed that school careers and the education achieved differed considerably between dyslexics and controls.

Over 30 per cent of dyslexics and only 4 per cent of the controls had dropped out at primary school level. Only 12 per cent of dyslexics had completed secondary school as compared with 38 per cent of controls. Only 2 per cent of dyslexics had undertaken higher studies, versus 30 per cent of the controls. The difficulties met with at school by dyslexic children were made evident by the fact that 50 per cent of them had repeated classes. They remembered school as a very difficult time, contrary to what controls said to whom it had been a very happy time.

At this moment I would like to explain the school situation in Poland. At the time these studies are conducted we have no school or classes for children with dyslexia. Classes are very crowded particularly in primary schools. Teachers are unable to prepare a special programme for pupils with dyslexia and dysorthographia. Thus, since the beginning of school dyslexic children are exposed to discrimination in the school milieu. In this situation it is understandable that dyslexics react to this stress situation with various defence mechanisms.

The earliest studies had shown about 80 per cent of dyslexic children to display neurotic symptoms versus 10 per cent of the controls, mainly in the form of phobic neurosis. Longitudinal studies revealed that all of these individuals were characterized by a fixed attitude of anxiety. They presented great emotional tension in the face of new social situations. All these individuals had feelings of inferiority and distrusted their environment. Other characteristic features were lack of independence in making decisions. All had difficulties in making social contacts and in adapting themselves to new situations. The interests of former dyslexics were limited. They were not interested in social intellectual life, neither had they any intellectual needs. Their main pastime was watching television.

In the light of these facts it is evident that no dyslexic person had even occupied an important position in social life, nor did they take an active part in social movement, not even in that of 1980-89 which was very important in Polish social life.

The answers given by dyslexics when questioned how they assess their life, seem to me very characteristic. Most of them thought that they had had no success in life. Arguments often repeated were: unrealized ambitions and plans made when they were very young, unsatisfactory work, lack of outlook for the future. But, most of them found happiness in family life. Their families were characterized by nuclear formation. Contacts within the family were very close. The married state gave men a possibility of compensating previous failures and of finding in this union satisfaction in the role of a responsible person. The women had taken up a subordinate role in the marriage. They found their satisfaction as good housewives, mothers and sexual partners. It was enough for them to get feelings of satisfaction out of their marriage.

Many papers dealing with dyslexics suggest that specific learning disabilities predispose to criminal behaviour. I have noticed no such predisposition in the group investigated.

Discussion

Longitudinal studies have shown that the natural development of dyslexic children had taken a different course than had that of controls. This was most manifest in their educational attainments, consequently in their social status. Also formation of some personality features was found to have been different in dyslexic individuals.

There arises the question of what was the main reason for the different fate of dyslexic children. As I stressed earlier the parents' educational level, family structure and socio-economic status were similar in the groups of dyslexics and controls compared. Thus, the start in life was similar for the two groups, but the life of dyslexic children was decisively influenced by learning difficulties resulting from the specific character of these disorders.

The childhood and adolescence of most of the dyslexic children was accompanied by neurotic symptoms, with anxiety predominating in the clinical picture. Primary fear of school triggered the mechanism of fixation and generalized a phobic attitude towards all situations of life. Anxiety also had a decisive influence on the formation of some personality features. The personality of dyslexics had formed under psychologically difficult circumstances, in a permanent clash between aspirations and the impossibility of realizing them. Difficulties in mastering reading and writing made these children unable to acquire intellectual efficiency.

Cognitive personality structures are known to be so complex during an individual's maturation that they may make him particularly prone to the destructive influence of difficult situations. This may be related to the fact that the development of these structures occurs simultaneously with increased emotional involvement in the realization of tasks put before a child, and an adolescent, by society and by themselves. Thus, longitudinal studies revealed that the specific difficulties in reading and writing had an important influence not only on these individuals' social position, but also on their personality. The emotional consequences of learning difficulties had led to the formation of certain personality features making social interrelations difficult.

Summary

A primary source of school failure is the specific difficulty in acquiring the skills of reading and writing. Persistence of these disabilities contributes to general learning difficulties. Poor results in elementary school reduce the chance for further education. Thus, dyslexics do not reach the same social position as their peers who had no reading and writing difficulties. Also emotional disorders caused by specific learning difficulties hamper the formation of some personality features thus making the social functioning of dyslexics difficult, and preventing them from achieving satisfaction in life. Fortunately, they find satisfaction in family life.
Specific reading and writing disabilities also limited intellectual interests and hampered personality development.

References at the author's.

Visually Related Reading Problems
Diagnosis and Treatment

Ivar Lie
University of Oslo – Norway

The possible contribution of visual anomalies to the etiology of reading difficulties has been discussed for nearly half a century, but the empirical evidence is still inconclusive. When comparing retarded and normal readers with respect to the prevalence of visual anomalies one has failed to demonstrate any consistent differences between the two groups, as shown in Figure 1.

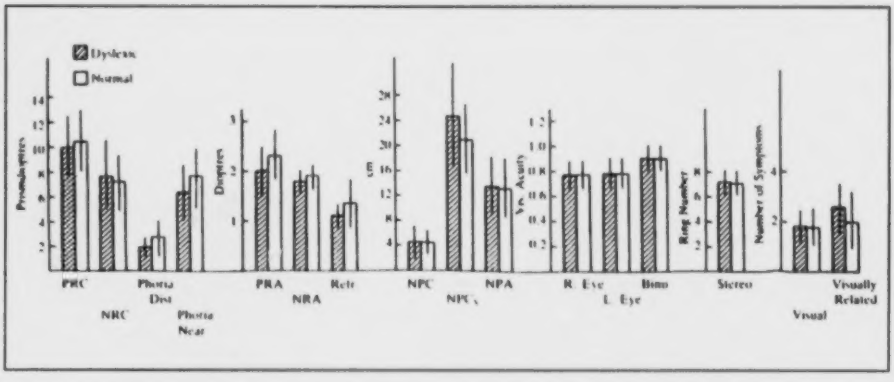

Fig. 1 Optometric measures and visual/visually related symptoms for retarded and normal readers [Lie, 1989]

However, this traditional research paradigm assumes the existence of a quantitative relationship between magnitude of visual deficiencies and risk of developing reading problems. In a recent study (Lie, 1989), population data on the relation between visual anomalies, visual problems and reading difficulties falsify this assumption. In the present lecture I will summarize some main results from this and related studies and present an alternative strategy for the investigation of visually related reading problems and for the clinical treatment of these problems.

Some theoretical considerations

When considering reading problems we should distinguish between technical, endurance and comprehension aspects of reading. Traditionally the technical aspects have been the main focus of interest, endurance and comprehension problems thought to be secondary effects of the technical problems. However, endurance and comprehension problems may exist quite independent of technical reading problems. Among so-called normal readers, we frequently find persons of any age who have great problems with sustained reading over longer periods of time. For children in the school situation such problems are normally not identified as reading problems, but labelled as lack of motivation for schoolwork. Among presumably normal readers we also find inefficient readers who often have to repeat words and sentences several times in order to grasp the meaning. This type of reading difficulties is usually attributed to problems of mental concentration.

Theoretical analysis have likewise focused upon the technical reading problems. Here impaired binocular fixation control is commonly suggested as the major visual factor in reading disability (e.g. Friedman, 1974; Bedwell et al, 1980; Pestalozzi, 1986; Stein et al., 1987). Impaired binocular fixation control may occasionally have a neurological cause (Stein et al., op cit), but is more commonly associated with oculomotor stress anomalies such as fixation disparity and convergence insufficiency (Friedman, op cit; Bedwell, op cit, Pestalozzi, op cit). Other oculomotor stress symptoms such as intermittent blurred vision and diplopia, visual fatigue, orbital aching, eye burning and headache might hamper reading interest and obstruct effective reading. This in turn might lead to endurance and comprehension problems and in extreme cases the interference of visual symptoms might even cause technical reading problems, particularly in the early phases of reading practice.

It might, therefore, be worthwhile to take a closer look at the possible contribution of oculomotor stress anomalies and related visual symptoms into the etiology of reading problems.

Oculomotor stress symptoms are normally mixed results of sensory and motor compensations of primary visual anomalies (refractive errors and phorias/tropias), and environmental stress conditions such as prolonged near visual work. Therefore, while we assume that oculomotor stress anomalies and symptoms cause reading disabilities, an interaction model is needed.

A model of this kind is proposed in Figure 2.

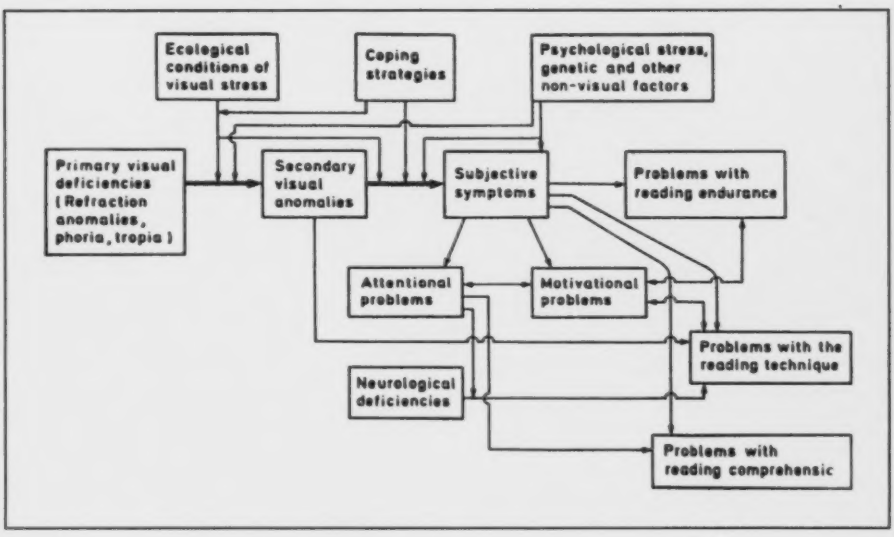

Fig. 2 Visual deficiencies and reading problems: An interaction model

The model adopts the common belief that sensory and motor compensation of primary ocular anomalies may develop into secondary anomalies (e.g. impaired vergence and accommodation capabilities, fixation disparity, amblyopia and anomal retinal correspondence) that manifest subjectively as visual symptoms. The basic idea of the model is that the causal relations between primary anomalies, secondary anomalies, visual symptoms and reading problems are modified by environmental stress conditions and individual factors. From the point of view of visual ecology, prolonged near visual work represents the most typical environmental stress condition of the modern society. In fact, near point stress may manifest as visual anomalies when no ocular deficiencies are present (Lie and Watten, 1987). Individual coping strategies may, however, greatly modify the impact of this kind of ecological stress. Most effectively, the person may stay away from near work activities. This happens, for example, when a child "looses" interest in reading and related types of close work and becomes increasingly engaged in outdoor activities. Frequent blinking, intermittent looking at distant objects, and frequent smoking pauses (among adults) are examples of more subtle strategies reducing oculomotor stress.

The same coping strategies that modify the development of secondary visual anomalies may also modify the development of subjective symptoms; the office clerk may be symptomatic but not the farmer. The development of both secondary anomalies and visual symptoms may be further modified by genetic factors, as well as by individual factors related to psychological and somatic illnesses.

When considering the relation between visually related symptoms and reading problems, factors related to motivation and attention have to be taken into account. In the simplest case visual symptoms like intermittent blur and diplopia make it difficult to see sufficiently to read and in extreme cases reading may become impossible after only a short time. But even in less extreme cases, reading motivation may be gravely impaired, and keep the child away from proper training. Eyetiredness, eyeburning, orbital aching and other motor strain symptoms likewise reduce reading motivation. Entering a mutual interaction, motivational factors and reading difficulties may easily escalate into a vicious circle, involving emotional reactions and inappropriate reading strategies which prevail even after the main causes are removed. The requisite mental effort of motor compensations of primary deficiencies, and the presence of visual symptoms, may disturb attention and make it difficult to concentrate on the content of the text and the reader repeats the same sentence several times in order to comprehend its meaning.

Attentional disturbances may also enter interaction with neurological deficiencies on reading capability. Retarded readers are some times clumsy, unconcentrated and hyper/hypoactive. Sustained motoric compensation of an exophoria that does not trouble a normal child, might be beyond the attentional capacity of a hyperactive child.

Finally, the model also includes the possibility that the achievement of reading skill is obstructed by visual and neurological factors that impair binocular fixation and eyemovement control, as referred above.

Empirical data

In a number of studies (Lie & Opheim, 1985; Lie & Watten, 1987; Lie, 1989; Lie & Opheim, 1990; Lie & Watten, 1992) we have confirmed a causal relationship between secondary anomalies and subjective complaints. Typical results are shown in Figure 3.

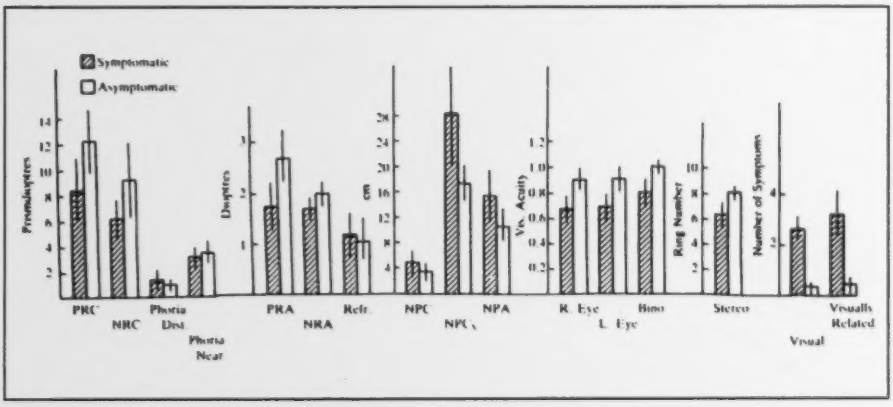

Fig. 3 Optometric measures for symptomatic and asymptomatic subjects [Lie, 1989]

In this study (Lie, 1989) symptomatic and asymptomatic 10 year old school children (N=112) were compared with respect to optometric status, including both primary and secondary anomalies. The results show significant differences in favour of better optometric status for asymptomatic subjects for visual acuity, accommodation, vergences and stereoacuity. When applying multiple regression analysis to the data a strong functional relation between secondary anomalies and subjective complaints is confirmed by showing that 42 per cent of the variance of subjective complaints can be predicted from the variance of secondary anomalies. From other studies (Lie & Watten, 1992) we know that after a period of visual stress (3 hours of interactive VDT-work) this regression coefficient is increased to about 70 per cent (Lie & Watten, 1992). Refractive errors and phorias (primary anomalies) do not show significant differences between the two groups.

A failure to demonstrate a significant quantitative relationship between primary anomalies, on the one hand, and secondary anomalies, subjective symptoms and reading ability, on the other hand, does not, however, invalidate the existence of a functional relationship. The question of a functional relationship may be investigated by looking upon the effect of optical full-correction of symptomatic retarded readers.

Typical optometric and subjective effects of correction are shown in Figure 4.

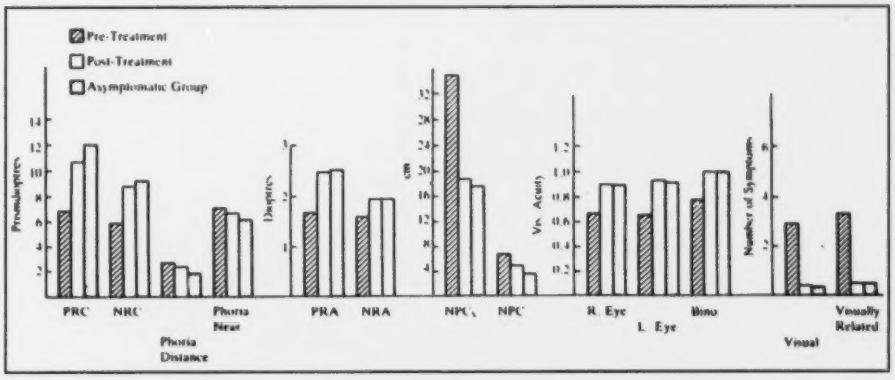

Fig. 4 Pre/post-correction data on optometric functions and subjective complaints for a group of retarded readers together with the corresponding results from the asymptomatic subjects in Fig 3 [Lie, 1989]

Twenty-six gravely symptomatic retarded readers were selected from the population study referred above (Lie, 1989) and corrected according to the full-correction method of H.-J. Haase (1980). The results show that subjective symptoms disappear and subnormal visual functions are normalized by optical correction of, presumably, insignificant refractive errors and phorias.

Reading data were collected by letting the subjects read matched prose text for five minutes before correction and for five minutes after six weeks of correction when they were taken back for the first vision control. In order to determine the net effects of optical correction, this short evaluation period was chosen and for the same reason the subjects were not offered any additional training during these weeks. From years of experience we know that although several re-corrections may be needed in order to obtain optical full-correction, significant optometric and subjective improvements are usually obtained during the first 6-8 weeks of correction.

Pre/post-correction data on reading comprehension and reading speed are shown in Figure 5.

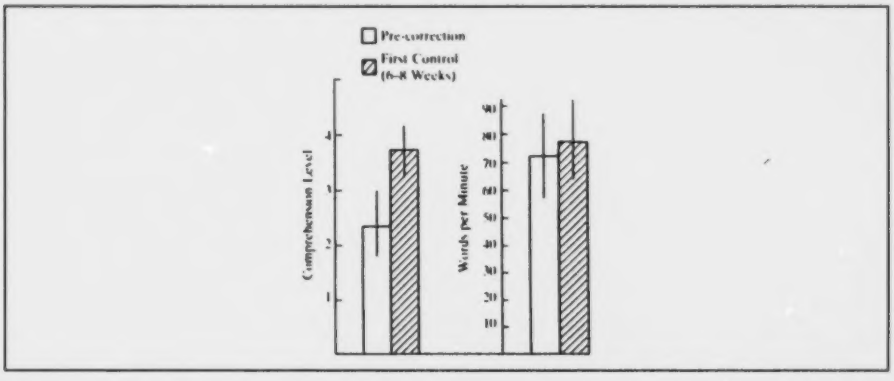

Fig. 5 Pre/post-correction data on reading comprehension and reading speed [Lie, 1989]

The data show mainly improvements of reading comprehension, indicating that when relieved from subjective symptoms and oculomotor stress the reader finds it easier to concentrate upon the content of the text. The failure to demonstrate very significant improvement of reading speed suggests that optical correction do not alone promptly improve the reading techniques. Data on reading endurance were not collected in this study.

Clinical implications

As to clinical work, the results presented above imply that diagnostic criteria for optical corrections should not be based on simple measures of primary deficiencies, as usually is the case. Instead, the criteria should be based on simultaneous presence of secondary anomalies and subjective complaints, irrespective of the magnitude of refractive errors and phorias.

As to vision screening techniques, traditional procedures should be radically changed by substituting optometric measures with registration of visually related symptoms as the primary basis for referring persons to professional optometric examinations.

When applied to diagnosis and treatment of visually related reading problems among school children, these principles mean that symptomatic retarded readers should be screened by representatives of the school (teachers, special pedagogues or school psychologists) and referred to optometric examinations on basis of registration of subjective symptoms and reading status. When treatment is indicated by relating subjective symptoms and secondary anomalies, a full-correction procedure should be carried through and followed up by proper training of reading techniques (Fig. 6)

We have just finished a Norwegian field study based on these principles. In the following I will report some preliminary results from this study.

Screening and optical full-correction of symptomatic retarded readers, a community study

Seven Norwegian communities were selected for this project. The aim was to gain practical and professional experience about how to organize a future system for effective identification and treatment of children who develop visually related problems in the school.

In each community, two school representatives (a school psychologist and special pedagogue) and a locally practising optometrist were organized as a team according to the principles referred above (Fig. 6). Except for one of the optometrists, no one had any special qualifications for this kind of work. It was necessary, therefore, to arrange training courses for both school representatives and optometrists.

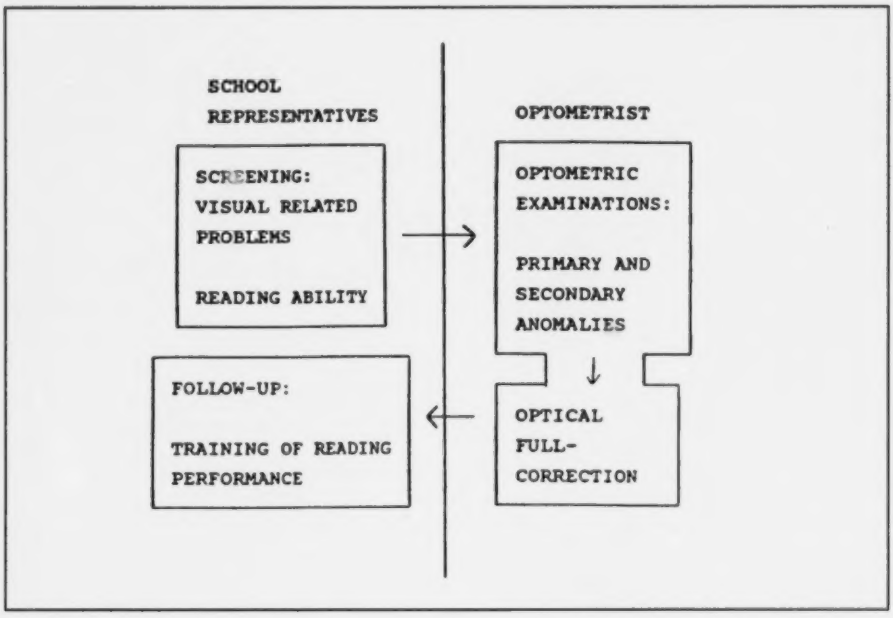

Fig. 6 A community model of cooperation between school representatives and local optometrists in screening, diagnosis and treatment of visually related problems among school children

Before the project started, a two-days introductory course was given, dealing with the theoretical background for understanding visually related problems as well as with screening and treatment procedures. The school representatives were trained to do screening work based on both questionnaires, behaviour observations and reading tests. The optometrists were introduced in practising optical full-correction, and they were given common instructions as to the procedure for optometric measurements. They were also offered supervision on individual cases.

During the project period of two years, there were arranged three one-day seminars for discussion of common experiences.

Results

One third of the participating children are not yet finished. Among those who are finished some data are missing due to incomplete measurements and to the fact that instructions have not always been followed.

The correction period lasted from a few months to more than a year.

Optometric status

Pre/post results of visual acuity (Fig. 7), positive relative accommodation, positive and negative relative convergence (Fig. 8) and near point of convergence (Fig. 9) show significant improvements of secondary anomalies. Approximately normal values are obtained. Negative relative accommodation did not change significantly.

These are mean results. Inspection of individual results shows large individual differences as to the effect of correction. However, with very few exceptions, improvements are obtained for all cases.

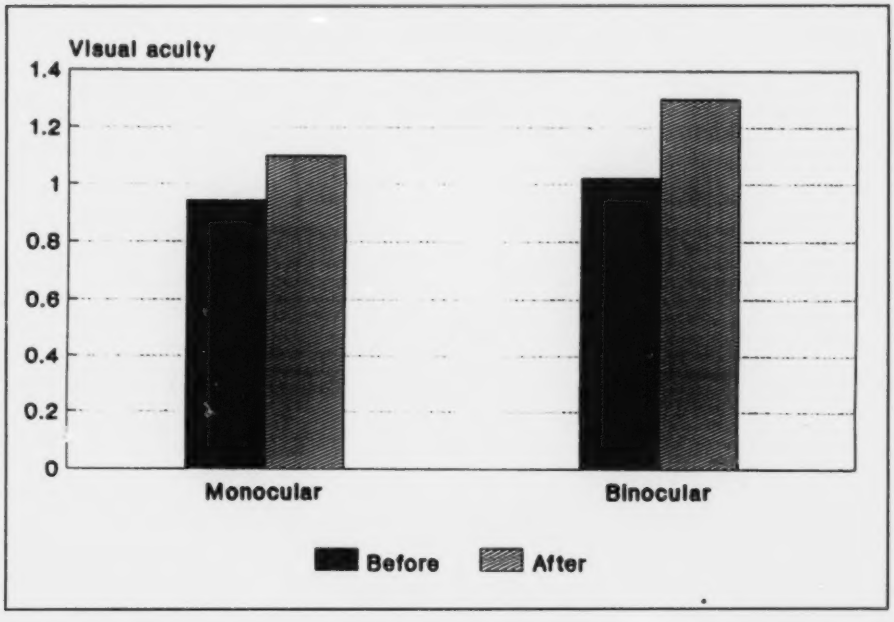

Fig. 7 Pre/post data on monocular and binocular visual acuity

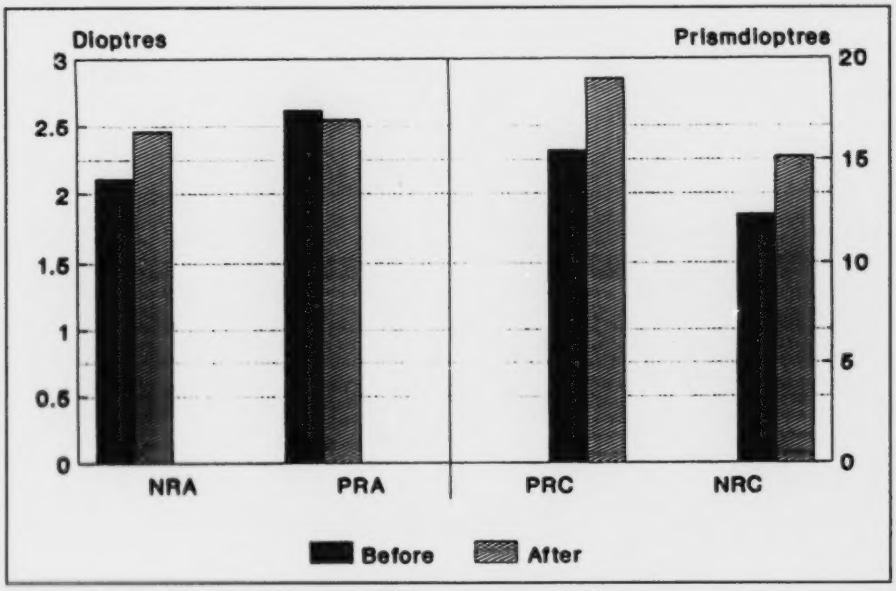

Fig. 8 Pre/post data on accommodation (NRA, PRA) and vergences (NRC, PRC)

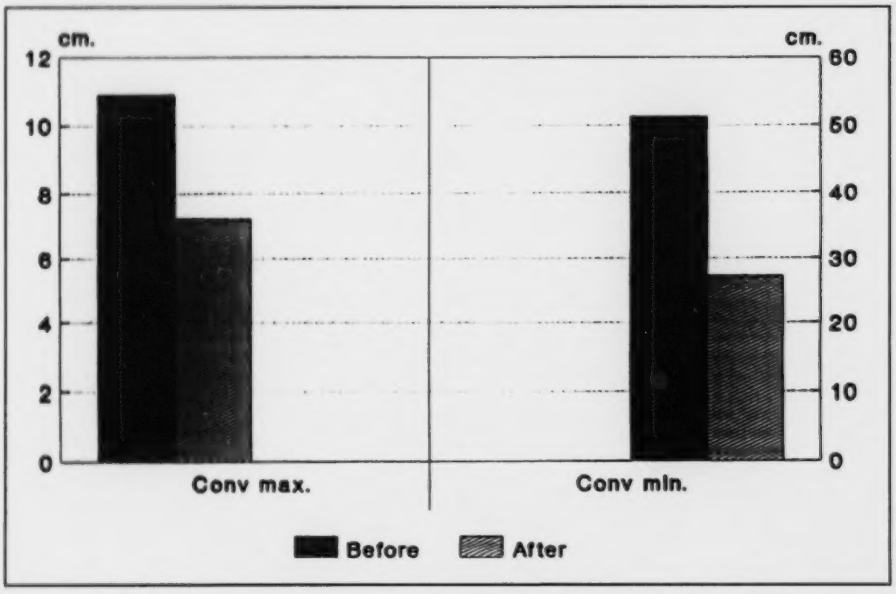

Fig. 9 Pre/post data on convergence. Conv.max. refer to the conventional measure of near point of convergence. Conv.min. refers to: push up of fixation object until voluntary control of vergence is reported; i.e. the distance at which the patient feels that some extra concentration is needed in order to avoid diplopia.

Subjective and behavioural status

Pre/post data on subjective complaints show considerable and significant improvements of all but two types of complaints (dizziness and nausea). Mean results of all complaints showing significant improvements are shown in Figure 10.

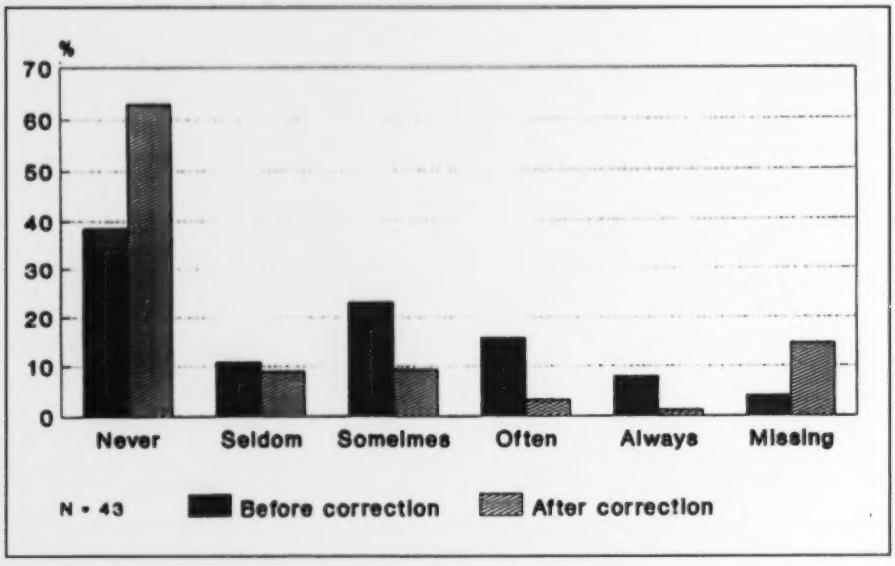

Fig. 10 Pre/post data on subjective complaints

Mean results for the single complaints are shown in Table 1.

Table 1 Pre/post data (%) on single subjective symptoms

Type of complaint	Never		Seldom		Sometimes		Often		Always		Missings	
	Pre/post		Pre/post		Pre/post		Pre/post		Pre/post		Pre/post	
Eyeburning	22.7	52.3	9.1	13.6	36.4	15.9	15.9	2.9	13.6	0	2.3	15.9
Tearing	45.5	52.3	13.6	13.6	11.4	13.6	25	0	2.3	4.5	2.3	15.9
Eyeaching	50	61.4	11.4	4.5	13.6	13.6	11.4	4.5	11.4	0	2.3	15.9
Visual fatigue	45	47.7	2.3	13.6	36.4	9.1	31.8	11.4	22.7	2.3	2.3	15.9
Blurred vision	43.2	65.9	20.5	11.4	18.2	4.5	11.4	2.3	4.5	0	2.3	15.9
Diplopia	40.9	79.5	25.0	4.5	18.2	0	11.4	0	2.3	0	2.3	15.9
Tremble of visual image	72.7	75	6.8	2.3	11.4	6.8	6.8	0	0	0	2.3	15.9
Jumping letters	52.3	75.0	9.1	4.5	22.7	2.3	11.4	2.3	2.3	0	2.3	15.9
Problems with keeping/ shifting lines	13.6	38.6	4.5	15.9	40.9	22.7	15.9	4.5	22.7	2.3	2.3	15.9
Headache	36.4	65.9	13.6	9.1	25.0	6.8	20.5	2.3	2.3	0	2.3	15.9
Aching neck	50.0	65.9	13.6	4.4	18.2	6.8	11.4	4.5	4.5	2.3	2.3	15.9
Nausea	81.8	75	6.8	4.5	6.8	4.5	0	0	0	0	4.5	15.9
Giddiness	70.5	70.5	9.1	9.1	9.1	4.5	9.1	0	0	0	2.3	15.9

Corresponding behavioural data are shown in Figure 11 and Table 2.

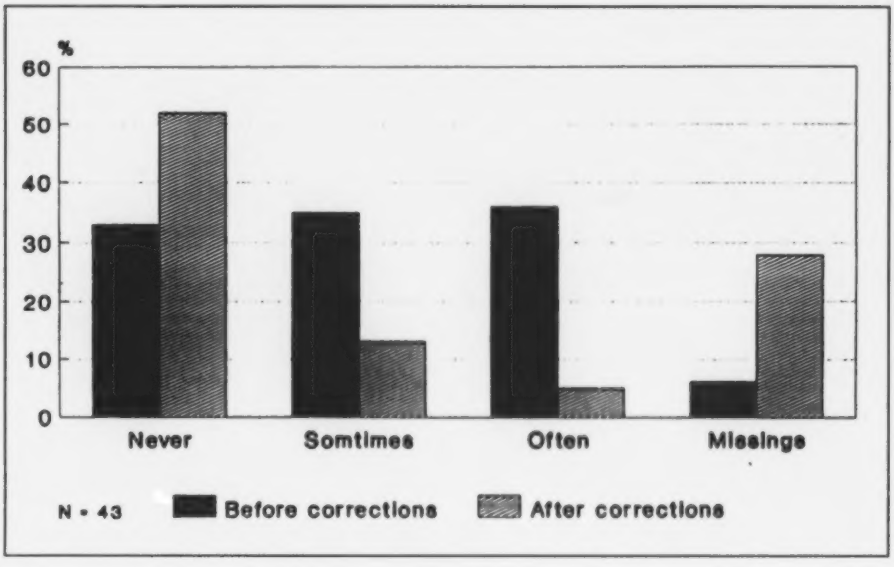

Fig. 11 Pre/post data on behavioural observations

Table 2 Pre/post data (%) on single types of behaviour observed

Type of	No		Sometimes		Often		Missings	
behaviour	Pre	post	Pre	post	Pre	post	Pre	post
Mistake of letter	38.6	38.6	38.6	18.2	18.2	6.8	4.5	36.4
Reversals	50	52.3	34.1	0	11.4	2.3	4.5	45.5
Problems with long words	18	40.9	27.3	15.9	47.7	4.5	6.8	38.6
Pointing when reading	27.3	25	50	38.6	18.2	2.2	4.5	34.1
Blinking	34.1	64.1	29.5	0	29.5	4.5	6.8	34.1
Rubbing the eyes	31.8	52.3	31.8	11.4	31.8	2.3	4.5	34.1

Inspection of individual results show large individual variations, but only exceptional cases of unchanged (or worsened) status are found.

An unequivocal attribution of these improvements to treatment effects would require control of both spontaneous changes and placebo effects. It should be mentioned, however, that the gradual nature of both full-correction and subjective improvements speak against placebo effects.

Reading results

Pre/post data on reading ability show considerable and significant improvements on all reading tests used. Results for the three tests (Hunstad I and II and Gjessing) are shown in Figure 12.

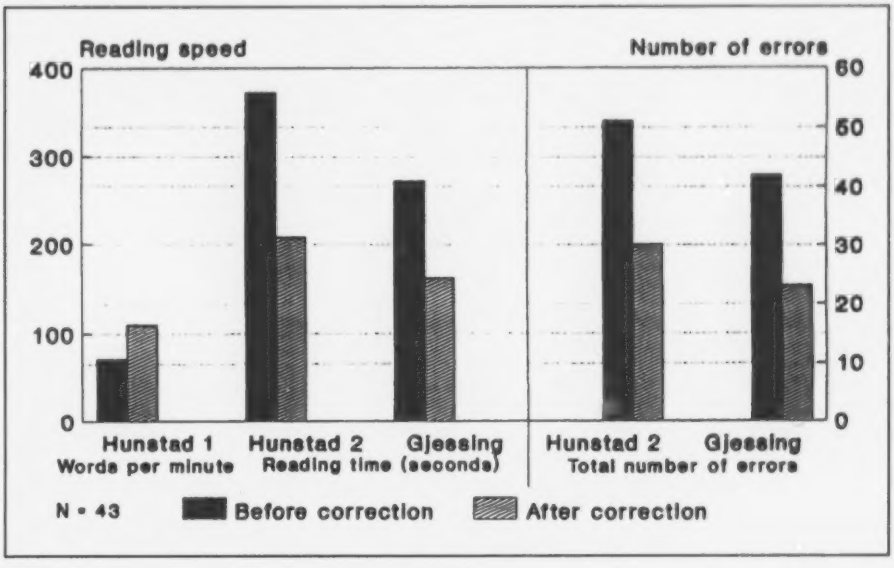

Fig. 12 Pre/post data on reading speed and errors

Hunstad II was modified to be used as an endurance test. Due to misunderstandings, the test has not been administered in a way that make pre/post comparisons possible with respect to endurance.

The participating children were not offered any special training during the correction period. However, ordinary training in reading over relatively long periods of correction may partly account for the improvements shown in Figure 12. In lack of control groups, the net effect of optical correction cannot be estimated.

The community model. Future modifications

Experiences from the present study suggest that a community model can be improved by undertaking the following modifications.

Firstly, the screening criteria should be better specified. The mere presence of visual/visually related problems do not of course qualify for referring a person to optometric examinations. In the present study, the school representatives were instructed to select children with severe problems. Cut-off criteria with respect to severity have to be better specified.

Secondly, the optometrists should be better trained in use of the optical full-correction method and they should practise the method full-time in order to get sufficient experience with the method.

Thirdly, follow-up training of reading performance should be intensified. In the present study the school representatives were instructed to carry out follow-up training as soon as optical full-correction was obtained. Since full-correction often lasts for half-a-year or more, one should take advantage of partial optometric improvements as well, by performing follow-up training **during** the correction period.

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How to Prevent Vision Problems Among Children in China

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In China, there are different vision problems concerning vision acuity in the population of different age groups, some of them are preventable or treatable, some of them have a very stubborn natural course. Prevention and treatment of blindness are the responsibility of ophthalmologists. However, the key point of preventing and treating blindness is preventive vision care. The vision care of children and teenagers is an important aspect of the whole health care work.

Prevalence of blindness and low vision in China

The prevalence of blindness (V.A. <0.05) and low vision (V.A. <1.0) varies in different regions and ages [1]. Generally speaking, the prevalence of blindness varies from 0.29 per cent to 46 per cent and low vision from 21.38 per cent to 53.33 per cent. There is a decrement in the prevalence of blindness in the last 30 years in most provinces such in Guangdong, the prevalence of blindness was 0.64 per cent in 1960's, 0.62 per cent in 1970's and 0.35 per cent in 1980's [2].

In order of frequency, main causes of blindness and low vision in China were cataract, infectious ocular diseases and trachoma. The last cause was the major one in 1950's. The major cause of low vision was glaucoma in Beijing and Hilongjang, cataract in Guangdong and myopia in Shanghai [3,4].

Prevalence of low vision among students

In 1989, there was a cooperative investigation for the distance visual acuity of 984874 students aged 7 to 22 years. The general prevalence of low vision was 34.26 per cent, with the mild case 14.67 per cent, and severe cases 61.07 per cent. The ratio of that of city to countryside was approximately 3 : 1, 18.24 per cent in the city and 6.29 per cent in the countryside [1].

The prevalence of low vision increased with age. In the age group of 7 to 22, it was 7.92 per cent, 7.91 per cent, 9.24 per cent, 12.69 per cent, 16.46 per cent, 20.48 per cent, 31.02 per cent, 34.80 per cent, 41.04 per cent, 47.78 per cent, 52.48 per cent, 53.25 per cent, 68.53 per cent, 67.74 per cent, 66.40 per cent and 64.90 per cent respectively [1].

Screening and treatment of amblyopia in the first grade pupils

The Ophthalmologic Research Center of the Chinese Academy of Medical Sciences in cooperation with the Epidemic Prevention Station of Beijing in the east part of the city made a survey of amblyopia in 5474 pupils of first year class. The prevalence was 3.22 per cent [5]. Best corrected visual acuilty lower than 0.9 with no organic disease was defined as amblyopia with 3 subdivisions: mild (V.A. 0.8 --); medium (Y.A. 0.3 --) and severe (0.1--) [6]. Among 106 amblyopic pupils, 75.64 per cent had refractive error with astigmatism. Of them, 60.26 per cent were hyperopic; 2.56 per cent, myopic; and 12.82 per cent mixed astigmatism. 24.36 per cent of the amblyopic pupils had refractive error without astigmatism. There was a close relationship between refractive power, type of fixation and degree of amblyopia [5].

The best time for prevention of amblyopia is before children go to school and the critical period for screening is the first grade in primary school. Treatment should start once diagnosis is made, including routine occlusion of the good eye, alternatively covering practice, physiologic visual stimulation and Synoptophore practice for the establishment of binocular vision [7]. Recent successful rate of treatment was 56.28 per cent. [5].

Pattern ERG study of amblyopia

Twenty-six control and 60 amblyopic children of 4-12 years old were tested with pattern ERG. The peak-time of b-wave was delayed in amblyopic children. In severe cases, the peak-time of a-wave was also delayed. The amplitude of b-wave decreased. P-ERG is thought to be a sensitive diagnostic test for amblyopia [8].

Normal value study of children

Prevention of amblyopia should be focused among pre-school children. The physiological status of refraction in Chinese pre-school children was studied with skiascopy under atropine. In 130 children of 4 years old, the degree of hyperopia was +2.15 D ~ +2.53 D. 182 children, 5 years old, degree of hyperopia + 1.80 D ~ +2.10 D. 114 children, 6 years old, degree of hyperopia + 1.74 D ~ +2.04 D. [9]. There was another study of normal range in 1283 children aged 1-12 years as shown in Table 1 [10].

Table 1 Normal range in children aged 1-12 years (N=1283)

Horizontal diameter of cornea	10.50±0.15
Distance between 2 pupils	53.74±2.05
Distance between 2 lateral orbital rims	93.79±2.61
Distance between 2 internal canthi	32.38±0.08
Distance between 2 lateral canthi	87.93±0.04
Length of lid fissure	26.95±0.03
Height of lid fissure	8.39±0.02

Prevalence of myopia among students

The prevalence of myopia among students in different grade levels is listed in Table 2. The rate of moderate myopia (-3.25 D) increased with the grade of school. The prevalence of myopia was more in female students than in male ones (Table 3) and more in schools in rural areas than in cities (Table 4) [11].

Table 2 Myopia of students

School	**Myopia %**
Primary	8.03
Junior mid.	17.44
Senior mid.	34.60
College	40.76
Total students	17095
Myopia	21.67%

Table 3 Prevalence of myopia by sex

School	**Male %**	**Female %**
Primary	8.45	11.17
Junior	17.64	23.50
Senior	26.97	33.28
College	35.74	44.77
	(p<0.01)	

Table 4 Prevalence of myopia among students in cities and rural area

School	Cities %	Rural area %	χ^2
Primary	3.58	4.24	$p > 0.05$
Junior mid.	12.73	5.32	$p < 0.01$
Senior mid.	27.66	12.67	$p < 0.01$

Factors relating to myopia in children

As we know, the pathogenesis of myopia has not been well known. There are several factors possibly related to the high prevalence among young students.

a. About 30 per cent of classrooms with natural illumination that is not standard.
b. Most pupils' reading distance is too short, some pupils' reading distance is as near as 10 cm.
c. Working at near distance: Long lasting tension constriction of ciliary muscles would premote atrophy of the choroid and the sclera and then weaken the wall of the eye ball. Other factors, such as, eye ball movement, accommodation and changes of intraocular pressure may also influence ocular axis elongation.

Prevention of myopia

How to protect people against myopia is a tough problem. It calls attention to many aspects.

a. Genetic consultation: No consanguineous marriage, if both parents are myopic, special attention should be made.
b. Pregnancy care: Avoid premature birth, avoid any disease during pregnancy.
c. Pay attention to nutrition for infants.
d. Children should do "looking far" practice a half to one hour daily for relaxation. In fine evenings they are suggested to count the stars in the sky.
e. Supervision to avoid too short reading distance, the two eyes should be 33 cm from the book.
f. The classrooms should have enough light which should shine from the left side, so that the right hand will not be in the way.

g. 10-15 minutes' break after one hour's reading, and eye care exercise for relaxation of accommodation.
h. The surface of the pages of the books should be clean and without light reflection, words should be clear and not too small in size.
i. No reading while lying down or walking, or on a bus or train.
j. No reading under too bright or dim light.
k. Time spent before TV should be limited, the distance from TV should not be too near, flashing light can also cause accommodation spasm.
l. Visual acuity should be examined regularly, as soon as visual acuity decrease is detected, treatment should be started.
m. Courses and home work should not be too much, so that pupils' eyes will not be much stressed.
n. Encourage for more outdoor activity.

The effect of eye care exercise on the prevention of myopia

Experimental myopia and clinical study showed that the ciliary muscle tension increased when looking near and the eye congestion occurred when lowering head. Both may be the major causes of myopia.

Through long-term follow-up of the effect of eye care exercise on visual acuity and refraction in 735 pupils from primary and secondary schools, with 198 controls not doing any exercise, it was found that eye care exercise has no obvious effect in the prevention and treatment of myopia. However, eye care exercise can be used as an active way of relaxation, it is good to release eye stress [10]. The school children in China do eye care exercise daily as a routine at school.

Demonstration of eye care exercise [10]

Attention:

a. Eyes closed.
b. Finger nails cut short, hands clean.
c. The points of massage should be correct, do not use too much strength.
d. Regular exercise in the morning and afternoon break.
e. Exercise should be stopped when there are skin trauma or red, edematous eyes.

Figure of Points

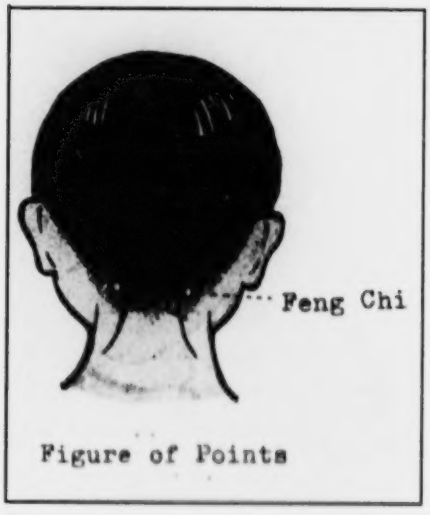

Figure of Points

First action: Squeeze and press Jing Ming acupoint (near the internal canthus at the root of the nose bridge).
Close both eyes. Press Jing Ming points with the tip of both thumbs, first press in a downward direction and then squeeze upward. Beats 4x8 (one press and one squeeze is one beat).

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Second action: Massage on Tai Yang point (about 1 inch lateral to the external canthus) and around the orbital margin.
Fold 4 fingers, massage Tai Yang points with the ventral side of both thumbs in a spiral direction. Use the second segment of the index finger of each hand to scrape around the upper and lower orbital margin in turn. Each beat is a scrape over the upper and lower orbital margin once. Beats 4x8.

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Third action: Massage on the cheek at Si Bai point (in the middle of the lower orbital margin).
Let the index and the middle fingers side by side, put them on each side of the wings of the nose, thumb put under the chin, then middle finger put down, the location of the tip of the index finger is Si Bai point, on which massage be applied. Beats 4x8.

Fourth action: Massage on Fong Chi point (in the recess just below the occipital bone at the back of the upper neck).
Use the index and the middle fingers, press the Feng Chi point. One press and massage for each beat. Beats 4x8.

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Fifth action: Dry washing face. Four fingers side by side, push along each side of nose bridge upward to forehead, then along each side of Tai Yang point, and then downward. One upward push is 4 beats, one downward push is 4 beats, beats 4x8.

In summary, China is a developing country in the east. There is traditional Chinese medicine with a long history. We have also learned from the west modern medicine and advanced technology. We are trying to use knowledge from both sides to prevent vision problems among school children.

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Four Meanings of "Meaning" and Reading Achievement of "Good" and "Bad" Pupils

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"Facing the book we should not ask what it contains but what it wants to tell."
Umberto Eco

Reading enables man to understand meaning. But what is "meaning"? What is the understanding of meaning? This paper refers to these questions. Its aims are as follows:

I to consider the problem of the understanding of meaning;

II to demonstrate the link between the problems of reading comprehension and understanding of meaning;

III to present the results of research into reading comprehension of good and bad achievers.

I What Does It Mean to Understand the Meaning?

1. Understanding as Deciphering the Symbol

This kind of understanding refers to verbal and non-verbal symbols. Their understanding – as it is assumed – consists in distinctively connecting certain images, concepts and judgements with given signs, words and gestures.

Yet, the researchers of understanding are first of all concerned with the word as a symbol. The one who reads and understands, making use of the symbols of the speech, is to create his/her own visions whose subject should be possibly identical with that present in the mind of the one who created the symbol. Then, understanding means a movement in two directions: from a real phenomenon to the word as a designation, and from the word to the phenomenon. The word points to a phenomenon being named by it, and its adequacy is therefore assumed.

M. Kreutz, a Polish researcher of the understanding of texts, has suggested that when we read a word, a representation of the object whose sign it is, is being created in our mind.[1] If this way of thinking is related to teaching, we demand that the pupil should explain the word pointing to a given fragment of reality. It is worth mentioning that with this approach, often adopted by pedagogues, we remain on the surface of the phenomenon of understanding.

This problem is connected with the idea of P. Ricoeur, who distinguished between "technical signs" – totally transparent ones, saying just what they mean – and "symbolic signs", non-transparent, whose prior, literal, open sense points to another sense given within its limits.[2]

Also E. Fromm distinguished several kinds of symbols: "universal", where an intrinsic affinity between the symbol and what is represented takes place; "incidental", which come into being an individual life and are comprehensible for the individual only; and "conventional", where a clear link with designated objects is nonexistent.[3]

Hence, the knowledge of symbols poses the question whether the understanding of the text means a mere technical decoding – or is there anything else behind it.

Contemporary cognitive linguistics researchers point to that "something behind". With this approach meaning is a central linguistic matter and the symbolic aspect of the language spreads to all its dimensions. For instance, G. Lakoff and M. Johnson, in their book "Metaphors We live By", have presented the metaphor as an integral part of every day language usage.[4] It indicates to the question of arbitrariness of the link between what signifies and is signified. Indirectly, it also evokes doubts whether reading with comprehension can be reduced to adequately deciphering verbal symbols.

2. Understanding as Comprehending a Whole

With this approach, understanding consists in the reconstruction of the global structure meant by the author through distinguishing its elements as well as rules organizing the whole.

W. Dilthey can be recognized as a forerunner of this way of thinking. His "proper understanding" relied on situating the examined fact within the frames of a given whole-language, culture, social system. Wrote he:

> "Understanding of spiritual creations in many cases leads only to the system in which particular parts of the work, as they are subsequently apprehended, create a whole. This form must be grasped in the self-dependence of its meaning".[5]

But the structural linguistics of the 20th century, to which contemporary theoreticians of reading comprehension refer, is characterized by the stress on a kind of (inner) methodological rigourism. Language is here conceived as a set of propositions. It can be profoundly described with strict rules connected with the theory of categorisation.

With the stress on the role of the inner structure of the text, it is assumed that there is adequacy between this structure – meant as the author's discourse – and the interpretation as the discourse of the reader. However, the contextual, situational reception of the text, possibly influencing its sense, is not properly recognized with this approach.

A pedagogue interested in reading comprehension can be drawn to a doubt which can be expressed in a form of the following question: to what extent is the reconstruction of the elements of the text, and stating the character of their interrelations, sufficient for grasping the meaning of the text?

3. Understanding as a Result of Explaining

This idea can be expressed in a short slogan: when you explain – you understand. It draws our attention to the problem of explaining, assigned to natural sciences. Such explaining grounds on the logical relation of resulting, linking explanans and explanandum.

Considering the character of the explanans, the following kinds of explanation can be distinguished:

- substantial explaining, where a scientific rule reflects the relation of the type including the object being explained, with a given substratum;
- attributive explaining, focusing on the relation of a given object with a certain attribute, where "attribute" is meant as such a feature of the object without which it cannot exist;
- genetic explaining, the essence of which is to state a regular relation of the object with other objects preceding in time, or with other states of the same objects;
- counter-genetic explaining, where the object is interpreted through reference to succeeding other objects, or other states of the same object.[6]

Distinguishing the above kinds of scientifically conceived explaining, one should stress their common feature, i.e. the tendency to search for the invariable, or better – the tendency to show that the object being explained is an element of a general, universal relation.

Pedagogues refer to this way of thinking when they identify the explanatory reading with the text interpretation performed by the reader in the light of general norms and rules assumed by him. "To explain" means then to subsume what is being explained to some general rule thought to be durable, constant, determined. What is explained in this way is thought to be understood.

This point of view refers to the premises of determinism as the intellectual foundation of classical natural sciences focusing on acquiring positive knowledge. But those canons, resulting from the mechanistic worldview, for the natural scientists of the 20th century have become part of the history of their disciplines since the categories of tendency and probability went into use.[7]

They question the rigourism of the traditional explaining – and, consequently – the rigourism of respective understanding. This also draws our attention to the possibility of co-creating the sense of an "objective text" by a "subjective reader".

4 Understanding the Text as Co-creation of Senses

The philosophical basis for this way of thinking is the thesis of the *fundamental importance* of this fact that *the man exists in relation to the world.*

This thesis is regarded distinctive for the thought of the second half of the 20th century. The fundamental character of the relation of the man to the world is meaningful also for the study of the teaching-learning process, and for the problem of reading comprehension related to it.

From that thesis, important questions for pedagogues emerge: who is the object, and who – or what – is the subject of education? What is the text used by the student? Who is the reader in relation to the text – what is "objective" and what is "subjective" here?

In other words, how does the relation "man-to-the-world" relate to the "man-to the-text" problem?

With the positivistic approach, the text is considered an objective source of cognitive matter, existing outside the reader. Even with critical reading, so conceived in the text is "authoritative" to the reader as it directs the critique.

With the relational approach, one can no longer consider the text to be isolated from the reader as they both present a whole, taking place in a broader context, and this is where the question of understanding should be placed.

To develop this idea, I shall refer to some elements of the hermeneutics of H-G. Gadamer. In his "Truth and Method" he wrote:

> "If the heart of the hermeneutical problem is that the same tradition must always be understood in a different way, the problem, logically speaking, is that of the relationship between the universal and the particular. Understanding is, then, a particular case of the application of something universal to a particular situation." [8]

Yet, the application Gadamer writes about does not mean making a technical use of knowledge, but the most broadly conceived union of human thinking-acting, the wholeness of changing oneself in the world.

Illustrating these theses by considering Aristotelian ethics, Gadamer formulates the following conclusion:

> "We, too, determined that application is neither a subsequent nor a merely occasional part of the phenomenon of understanding, but co-determines it as a whole from the beginning. Here too application was not the relating of some pre-given universal to the particular situation.
>
> The interpreter dealing with a traditional text seeks to apply it to himself. But this does not mean that the text is given for him as something universal, that he understands it as such and only afterwards uses it for particular applications.
>
> Rather, the interpreter seeks no more than to understand this universal thing, the text; i.e. to understand what this piece of tradition says, what constitutes the meaning and importance of the text. In order to understand that, he must not seek to disregard himself and his particular hermeneutical situation. He must relate the text to this situation, if he wants to understand at all." [9]

II The Link between the Problem of Reading Comprehension and Understanding of Meanings

Consideration of the problem of understanding shows that the reader can be treated as a "slave of the text", or – in a better situation – he can be critical about what the text carries on; he can even be creative – but still with the reference to the actual text.

But the reader can also be treated as a co-reactor of meanings. He knows that the book wants to tell something, though, as Umberto Eco puts it, it does not contain the last word.

In pedagogical debates on reading comprehension we usually notice its multi-layerness – informative, critical, creative reading.[10] But whatever the kind, reading is treated here as an outside "task" for the student rather than the human life itself.

Whereas contemporary philosophy leads us to a different view, comprehension brings about problems of human self-consciousness and totality of understanding. Perhaps it is worth considering what results from this to the teacher of reading?

- What is the nature of the unity of the text and the reader in teaching?
- Is it so that in the elementary teaching we should "separate" the text from the child in order to overcome technical difficulties in deciphering meanings, as well as the inner cognitive structural shortcomings, and then "bring" the text "closer" to the child?
- Will the text, separated from the child-reader, not remain forever remote, alien, objective, assigned by someone?
- To what extent should we separate or link the teaching of reading and the teaching of writing, the reading of own text and of those written by somebody else?
- How to present texts to the pupils: as a respectful other people's property or as something familiar, rather uniting than dividing people?
- Shouldn't we pay more attention to the ways of creating the text rather than to final results of the creation?

To sum up, I can say that the reader's attitude to the text and to the reading seems to be of crucial importance for the way of understanding the meaning of what is being read.

III Presentation of the Results of the Research into Reading with Comprehension

In the last part of the paper I shall present the results of my empirical research into reading comprehension of pupils with different school achievement, and in the end I shall combine theoretical and empirical aspects of the whole presentation.

The research concerned 690 pupils from 10 primary (eight-form) schools in Gdansk and Gdynia. Random sampling has been adopted. The children, ten and eleven year olds, were learning in 29 classes.

The criterion of selection and division of the pupils into groups characterized by different level of achievements were school marks obtained in basic school

subjects (i.e. Polish, mathematics, nature, history, geography, biology) during so far four or five years of schooling.

On the basis of the five-grade achievements scale used in Polish schools (practically grades 0 and 1 are not used) the following group division of pupils with different achievement levels has been settled

1. very good achievers	– school	marks	average	5-4.5
2. good achievers	– "	"	"	4.49-3.7
3. satisfactory achievers	– "	"	"	3.69-3
4. unsatisfactory	– "	"	"	2.99-2

The aim of this research was to state coincidence of the level of school achievements and the quality of silent reading comprehension.

To assess the silent reading comprehension, the test developed by the International Association of Educational Achievement, based upon Bloom's taxonomy, has been adopted. The test consists of four stories and twenty-four tasks consisting of two elements each. The pupil can get one point for each task solved correctly. To convert point scores into grades I have adopted a pretty liberal scale used in Poland by A. Warsicka:[11]

1. very good	100 to 90%	correct	answers
2. good	89 to 70%	"	"
3. satisfactory	69 to 50%	"	"
4. unsatisfactory	below 50%	"	"

Setting up two scales has enabled me to confront and compare the results in silent reading comprehension and school achievements of the pupils.

The research was conducted by the university students of education taking part in a MA seminar.[12]

The global results are as follows:

School achievement level	Silent reading comprehension results				Total
	very good	good	satisfactory	unsatisfactory	
very good	7 3.0%	153 64.8%	62 26.3%	14 5.9%	236 100%
good	6 2.7%	101 45.9%	89 40.5%	24 10.9%	220 100%
satisfactory	1 0.5%	61 33.5%	93 51.2%	27 14.8%	182 100%
unsatisfactory	– –	20 38.5%	12 23.0%	20 38.5%	52 100%
	14	335	256	85	690

The statistical processing of the correlation between school achievements of all pupils and reading comprehension shows:
$\chi^2 = 85.78$ for p 0.001;

Tchuproff correlation coefficient T = 0.204.

Low correlation; definite but small relationship.

For respective pupils with different school achievement levels the results are as follows:

1. Very good achievers: $\chi^2 = 44.349$; p 0.005; T = 0.571.
   Moderate correlation, substantial relationship.

2. Good achievers: $\chi^2 = 2.739$; p 0.05.
   Good achievers are not distinguished by reading comprehension results.

3. Satisfactory achievers: $\chi^2 = 28.484$; p 0.001; T = 0.521.
   Moderate correlation; substantial relationship.

4. Unsatisfactory achievers: $\chi^2 = 34.682$; p 0.002; T = 0. 971.
   Very high correlation; very dependable relationship.

The statistical processing has confirmed the hypothesis according to which school achievements correlate positively with reading comprehension results, although a different result has been obtained with the group of "good" achievers.

Yet, statistical calculation – as we know – reduce the quantitative data obtained to a given common measure, which results in particular, not typical details being overlooked: such details can be more interesting than the general rule established by the calculus.

I would like to draw the attention of the reader to such cases occurring in the research. They are particularly distinctive with pupils achieving contrastive – the best and the worst – school results. On the one hand, we have found that 38.5 per cent of "unsatisfactory" pupils read and comprehend well. On the other hand, among "very good" achievers we have found 26.3 per cent whose reading is merely "satisfactory" and 5.9 per cent whose reading is "unsatisfactory". It makes up to a total of 32 per cent of children at this level of achievements.

The statistical calculation has marked this problem as regarding "good achievers", but it has not shown other cases, denying the thesis that the reading comprehension ability presents a remarkable element of school achievements. To interpret these cases it would be relevant if a "case study" method were adopted – which has not been done so far. In such research answers to the two following groups of problem questions could be searched for:

1. What other factors – along with reading comprehension – determine school achievement of pupils?
2. What kind of knowledge is being preferred by school:
   is it a rote knowledge, where little importance is attached to understanding matter acquired, or is it a knowledge understood by pupils?

If rote knowledge is appreciated at school, some diligent students have a chance to obtain good marks, even when they show poor reading comprehension. On the other hand, some others – who understand quite a lot of what they read – but are less scrupulous in rote learning, can be regarded as poor learners.

This hypotheses, however, demand careful verification.

Conclusion

The assessment of reading comprehension was based on a test which demanded the children to decipher verbal symbols only, and to grasp the structure of what was read.
This approach, however, does not exhaust the possibilities of considering understanding. Recognizing the reader's attitude to the text, an attitude which can either close, stiffen his cognitive behaviour or open it, set it to co-creation of the

text's senses, seems to be of crucial importance here. Meaning depends on contexts and those vary according to individual experiences, individual attitudes.

I'm particularly curious of the attitudes to the text which could be revealed by further research in poorly reading good achievers, as well as in those students who obtain poor school marks and show good reading comprehension.

The issues named here, as well as those still unknown to us, seem to show that the problem of reading comprehension is still full of intriguing questions.

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Scientific and Methodological Requirements to the Literature for Adult Education

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Adult education is one of the forms of higher education and qualification improvement of persons in different branches of national economy. In the USSR 40 per cent of all the students follow this form of education. The graduates of the higher educational institutions receive diploma analogous to the one granted after graduating day-time form of education, but no new working places are needed for them as they get promotion as they improve their knowledge in the course of education, the fact which attracts many sections of population of the country, especially lately.

In engineering specialities the students study one year longer than the day-time students, i.e. five years and ten months.

At the basis of the educational process of correspondence-students lies self-directed work with books – i.e. self-directed learning, which requires textbooks and manuals suitable to this system of education.

The textbooks and manuals for the students of higher institutions of all types of education must answer the following general scientific and methodological requirements:

- to ensure at a high scientific and methodological level the disclosure of the subject's syllabus content taking into consideration the latest science and technology achievements;
- to ensure the conditions for self-directed creative work of the student and the formation of his theoretical and professional level;
- to be accessible for effective learning, to promote motivation and form creative habits of the students.
- to ensure the continuity of knowledge, acquired in the course of former studies, the close interrelations between courses of studies and the succession of various types of specialists training – theoretical, mathematical, economic and ecological etc;
- to create necessary conditions for using technical aids and computer technology in the course of education and to ensure close logical and structural relation between them.

The following succession of basic elements of textual material and all kinds of references is adopted when compiling a textbook: table of contents, introduction, methodological directions, basic text, conclusion, recommended literature, supplements, indices.

There is a basic textbook for each subject included in the syllabus. The volume of the textbook is determined considering the number of academic hours, allotted to the subject in accordance with the typical curriculum taking into account the specific character of the course of studies, its position and significance for training experts. A list of additional literature is also included for deeper learning of separate parts of the course. However, the correspondence student is not able to use completely the textbook intended for the day-time education because of lack of time allowed to the course of study. The correspondence student, as usual, works in the national economy in the field, chosen for the course of study in the institute and taking into consideration the character of his previous work and knowledge this textbook should have some specific requirements. That is why methodological manuals or educational letters are created for each course of studies of correspondence students. They are edited in a centralized manner for all engineering institutes of the country on general theory subjects: as for special subjects and professional training subjects these methodological manuals are grouped according to related specialities and are edited by associations of institutes.

Methodological manual of today contains:

- working syllabus of the course of study with the number of academic hours to be attended, a list of laboratory assignments, forms of knowledge checking in a definite succession;
- basic theoretical principles of the course of study, prepared by the author in the form of didactically and methodologically worked out material, answering the purposes of education;
- definition of logical and didactical succession of educational information transmission for knowledge acquisition, developing skills and habits, reproduction and usage of previous knowledge when studying every point of the theme;
- test assignments and tasks for the course paper and project in case they are included in the curriculum, examples of task solving;
- questions for self-directed checking on most difficult parts of the course of study;
- use of computer technology and other audio-visual aids.

The educational material introduced in the manual is presented lately in a specific way, which may be characterized as a means of applying systematic approach to the educational material.

"System" is an ordered set of various interrelated elements, joined by common functioning and direction purposes which interacts with the environment as an integrated unity.

"Structure" is an inner arrangement of any system, it is characterized by stable relations between the elements of the system, ensuring its invariability in the course of functioning and being common to all systems of the given type.

Structuring of the theoretical material of any subject is aimed at creating structure of scientific knowledge, optimal from the point of view of time economy and rational learning, which is of paramount importance for correspondence students. Structuring of the material, i.e. its organization according to some features into a system, makes it possible to increase the information volume in the short time memory of the student, i.e. to increase the number of information units.

Graphic presentation of the educational material is necessary to develop systematic knowledge, as the national systems are not given in a ready form, they should be formed purposedly. Active introduction of symbolic and graphic forms of knowledge presentation in learning leads to content compression disclosure of the inner structure of the notion and raises the effectiveness of knowledge and develops symbolic style of thinking in students.

Every correspondence student at the beginning of the academic year is given a complete set of educational and methodological manuals for all the courses of study, he accomplishes by himself all the test assignments and course-projects, then he posts them to his teacher for reviewing and after his assignments are checked he can support them on coming to laboratory and examination sessions. Textbooks and manuals are given to the students at the library of the educational institution free of charge and should be returned when the course is finished. These manuals are sold in a bookshop if the students wish to buy them.

The manuals for adult education are created by most qualified scientists and specialists in teacher training having experience of work with students, receiving education without leaving their jobs.

The Idea of Childhood in Astrid Lindgren's Early Stories

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Motto:
It seems more interesting to study in detail differences between individuals than to admire similarities.

The task of this article is neither to reconstruct the beginnings of the Swedish literature for children after the Second World War nor to discuss the extent of Astrid Lindgren's part in spreading the theory of free upbringing (fri uppfostran). This article aims at giving some comments on the anthropological and ethical meaning of childhood underlying the literary images in a story of Lindgren's Pippi Långstrump trilogy (Pippi Longstocking, 1945). The emphasis has been put on the manner in which the child and adult protagonists are created and what is its meaning.

Two observations on the past

Up to the close of the 18th century both philosophy and literature cherished a belief that man's maturity was a touchstone of his value and that the present was the culminating point in human development. At some time this development was understood as the increase in knowledge, righteousness and sense of beauty. It was only the Romantic period that discovered and ennobled childhood in the life of an individual and mankind, thus, it considerably contributed to the formation of a new specific trend in literature, i.e. books about children and for children. The child's point of view, dominating in this literature and strictly connected with it criticism levelled at the world of adults, gained in attractiveness. The best proof of that remark may be a rich gallery of child protagonists which has appeared since the early Romanticism – encompassing the whole stratum of child characters from the small melancholy geniuses to the contemporary portraits of small Genghis Khans (in William Golding's "Lord of the flies").

Astrid Lindgren's conviction that childhood is an important and unique period in the individual's biography found its expression in a story of a small impudent and independent girl who on the one hand excites admiration of other children

and on the other worries and shocks the grown-ups. The difference in reactions to the child reveals the presence of two separate points of view and two separate attitudes concerning children in the book: the first one is that of approval and as such it is unconditional, the other one is negative – as it is objectified. The tale of Pippi is a metaphor story: the child's perception of the world allows here to lay a change against the rule of adult people. The highly organized model of life based on authority and often restoring to violence is sharply contrasted with the thinking and behaviour of the child. Symbolically Pippi is a representative of a different model of humanity; here her shocking behaviour is only a sign of rebellious and contemptuous attitude towards the conceit and hypocrisy of the adults.

The child of the century

How is then this protagonist or 'the child of the century' (a nickname given to her in recognition of her frequent presence in literary discussions) created in many of Astrid Lindgren's stories?

Paradoxically the 9-year old Pippi Longstocking possesses features which may be regarded as synonymous with maturity. Altogether, they may be best summed up in the formula: freedom and power. We deal here as if with a topsy-turvy world: the young heroine behaves in a very mature way whereas the adults unfortunately profess doubtful morality and limited intellectual powers. What are the consequences of this reversal of roles?

The first effect is the conviction of the existence of a rift or conflict between the interests of children and grown-ups. The further outcome is the recognition that the ideals of childhood, the child's point of view and its hierarchy of values do not have to be inferior to those of adults but they are simply different and very frequently more human. The idea of a gap separating these two worlds and their inpenetrability in Astrid Lindgren's works is, first of all, reinforced by the personal characteristics of Pippi (a very selection of those), by the manner in which she settles her conflicts with adults and, finally, by her feeling of necessity to strive for the realization of true humanity. The authoress lets her heroine do things which exceed the social expectations and standards of order, freedom, power, and tolerance; in other words they go beyond the limits of attitudes permitted in the world of adults. Pippi stands out from her milieu because she reveals and realizes the child's secret dreams of inordinate strength, unbound freedom and power over adults.

Freedom

From the very beginning Pippi is guaranteed full freedom. She is a lonely, orphaned "strange child". She grapples single-handed with various hardships and with the different representatives of the society who try to bring her literary

"predecessors" like Anne of Green Gables (Lucy Maud Montgomery 1874-1942) or Huckleberry Finn (Mark Twain). Pippi does not dream of home or parents, she fully accepts her fate. She lives in the world of her own imagination and, in fact, she does everything that pleases her – as she sings in a song of her own. Indeed, this part of the song may be interpreted as a motto of her sovereignty.

However, which factors determine Pippi's freedom?
There are several of them. Apart from loneliness, there is also self-sufficiency and extraordinary strength, but these are not of primary importance. What really guarantees the freedom she enjoys belongs to the order of spiritual values. I have here in mind the natural law; the kind-heartedness as the main "motive of the girl" stands in the stark contrast to the social rules which were in force then. It is due to this kind-heartedness that Pippi always comes into collision with the social rules concerning children. Refraining from the questioning "the social order as a whole", she opens a perspective of a greater freedom – just by her disobedient and defiant existence and activity. Remaining independent, she stands a chance of realization of her childlike humanity.

Freedom embodied by Pippi has a character of a dream or a wish. When compared with Pippi's limitless possibilities, the limited world of common children deserves a pity. However, the very contrast between these two realities suggests acceptance of the small world. It is only Pippi who may lead the life of freedom and independence; ordinary children cannot and, in the end, would not like to live in this way. Freedom remains an elusive dream.

Power

Children's dreams of freedom are usually associated with a desire for power and strength. The educationists of the 1930s who confirmed this relationship, emphasized first of all the significance of the child's need for wielding authority (or, in other words, power).

In the world absolutely dominated by adults, a child feels weak, oppressed and downtrodden. In order to bring about a change of situation, a child needs two things – authority and power. Hence, the child dreams of possessing them. Pippi who is just an embodiment of authority and power is a literary manifestation of children's needs. She also offers a proof that it is possible to relieve those inclinations, usually suppressed by education. She satisfies childlike dreams, simultaneously showing children that it is possible to wield power and not to abuse it. Unlike other children, Pippi is able to defend herself from adults, though it does mean that she controls them. She is equal to them or, at times, surpasses them. Owing to her vivid imagination, financial self-sufficiency, strength and shrewdness, she wins all the confrontations in which children are usually defeated. This refers both to the verbal and strength-testing confrontations. Pippi's treatment of

property is very similar. There is something unassuming almost unconscious in the way in which she thinks about possibilities secured by money. Most obviously, this is quite intentional on the part of the authoress. We do not witness here any homage-paying to that attitude of power. Money has only a practical function, securing freedom and sovereignty to the heroine. As such, money is equivalent to the heroine's personal features – shrewdness and quick wit.

Pippi and the world of adults

Adults always play second-rate parts in 'Pippi Långstrump' almost always forming a negative background for the children-protagonists in the story.

Creation of a character who as a child will not be tamed by violence applied by the grown-ups because of the child's moral superiority – is certainly one of the ways in which the authoress expresses her attitude to children in general.
This picture is completed by a number of unpleasant adult characters. The satire is merciless here and is aimed at all those mean, conceited, and proud people, against individuals who use a superficial judgement, against the vices of presumption and arrogance. The satire is also directed against other faults: feeling of superiority reinforced with the power of money, stupidity, absence of feeling, egoism, blindness to the needs of other people. The criticism ridicules pompous gravity and narrow-mindedness of adults – shortly, all those features which make warm-hearted contacts impossible between children and adults.

The general meaning which Astrid Lindgren wished to convey was an appeal to respect distinct separateness of the child – which she transformed into a wider humorous context. As long as any form of those features – intolerance, racism or totalitarian thinking is present in our culture Lindgren's message still remains valid.

Notion of Goodness and Evil in *Fairy Tales and Stories* by Hans Christian Andersen in the Light of the Contemporary Christian Theodicy

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The task of my work is to confront the world of Andersen's fairy-tales with a contemporary discussion of the power of evil. Before I start my reflections and comparison I would like to present the source of evil in the light of contemporary theodicy. "The part of theology which is concerned to defend the goodness and omnipotence of God against objections arising from the existence of evil in the world." [1] Leibniz used the term *theodicy* first although the dispute had lasted for a long time. Nowadays a French Dominican friar Bernard Bro took up the problem in his book *Power of Evil*, written 1976. Man cannot reconcile himself to the existence of evil and he does not know how to deal with it. He needs an example to follow. Man very often blames the Creator for all the evil that enters our reality. Bro endeavours to explain to the Christians that we ourselves are responsible for the moral state of the world. God takes only responsibility for the creation and for endowing man with unlimited free will.

Since the times of Adam and Eve people themselves have decided about the reality in which they wanted to live by the very act of choice between the attitudes of good and bad criminal, crucified together with Jesus. The first one means trust in God, the other one means rebellion. Our trust makes us charitable, loving and willing to suffer together with our neighbours. A Christian acts out of the depth of his heart but never out of pity. This feeling is inferior to mercy and is not worth the name of love of one's fellow creature. Rebelling against injustice we abandon both people and God. The Lord gives us the only answer to evil – love through suffering. "Jesus came to us not to remove suffering but to suffer with us ..." [2]
The love of a true Christian should be modelled on the fatherly love revealed in the parable about the prodigal son. "In the face of evil God does not claim his right, he does not defend himself" [2]. When charitable man takes all evil upon himself because he follows the voice of love, he shares the fate of the man who suffers more. "Be not overcome of evil but overcome evil with good." [3]

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[1] The Concise Oxford Dictionary of The Christian Church, Oxford, 1977, page 507.
[2] Bernard Bro *Power of Evil*, chapter 3 (in own translation).
[3] Authorized version of the Bible, New Testament, Romans, 12.21.

After presenting thoughts of Bernard Bro, we will turn to Hans Christian Andersen's fairy-tales. It is necessary to follow the plot if we want to comprehend the relationships between good and bad powers in the stories. *De røde skoe (Red shoes), Anne Lisbeth (Ann Lisbeth), Sneedronningen (The Snow Queen), Skyggen (The Shadow)* [4] *Pigen som traadte paa brødet (The Girl Who Trod on the Bread)* [5]. One can wonder whether these short and simple narrative works can shed so much light on morality and can be confronted with philosophy of theodicy.

Tales told for children [4] – which was the first title of the volume, later changed into *Fairy Tales and Stories* [6], are not typical representatives of their species. The reader gets an impression that they are not fairy-tales but rather parables. Under the cover of the fantastic world full of elfs, witches, ghosts, spectres and fairies, there exists another world, much more complicated, a world where good and evil fight a never-ending, moral and physical battle. This sphere is incomprehensible to children. Only the mature reader can estimate their real value. The confrontation will help to cast a new light on the ethical side of Andersen's stories.

A world where good and evil fight a moral and physical battle. What does it mean? An impartial account, well-kept distance, lack of any kind of personal comments, an indifferent tone of narration – all this suggests existence of evil and frequent acceptance of its triumphs. It seems that the power of darkness rules the world of *The Shadow* and the story's protagonists cannot defend themselves. But can they not really? It may occur that the very act of refraining from retaliation signifies fight. Bro would state that suffering and helplessness are the power. "There will not be any other decisive meeting with the power of evil but in Olive Garden and Golgotha. The madness of rebellion and evil cannot be answered by anything else but madness of the cross. As the Lord respects our freedom, he allows us to understand this madness to which he calls us and which tells us to admit evil without defending ourselves." [7] In *The Shadow* the attitude of the Scholar may be translated either as a defence or as a usual naiveté and giddiness. When the Shadow requires the Scholar to become his shadow i.e. lie at his feet, he refuses. Then the Shadow does away with him.
Evil destroys the Scholar physically but he wins morally. He starts to resist when evil seems to triumph. At the beginning the Scholar pretends compliance with the Shadow's wishes. He trusts the Lord, he does not demand any justice because it very often turns into evil even against our wishes. "So, if you want to avoid future punishment, try to suffer the temporal evil in consideration of God." [8] The Scholar protests at last, but his rebellion is that of goodness. If he

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4 Translation by E. Bedsdorff *Danish Literature in English*.
5 in own translation.
6 in translation R. Spink *Fairy Tales and Stories*, 1960.
7 Bernard Bro *Power of Evil*, chapter 2.
8 Thomae Hemerken a Kempis, *De imitatione Christi*, Varsovia, 1981, chapter 3, 12,2. In own translation – Thomas a Kempis, *Imitation of Christ*.

had agreed to the Shadow's suggestions, he would have become evil itself. He could do this by any means. Although the Scholar's attitude is controversial, one can find some elements that are common to the philosophy of Bernard Bro i.e. compliance and rebellion of goodness. The Scholar dies like Jesus Christ, crucified by evil.

Andersen maintains that evil exists and is an indispensable element of our life but he does not accept it. Evil does not play the leading part in his tales, though everything speaks for it. I think that Andersen emphasizes the existence of sin on purpose. The larger part of his stories is dedicated to those who are morally ill. Evil is defined as non-goodness, as a lack of love, modesty and godliness. In this context evil plays a supplementary part. Goodness, reaction to evil and redemption from sin are the main subjects of his tales. Andersen does not try to discover the origin of evil, but he paints his picture basing on the contrast. An innocent being, a child, is a symbol of pure goodness. It has all good characteristics. It is ideal. It stands in opposition to those who are bad in extreme. An innocent child has a moral right to judge: to accuse and to acquit. An innocent child is the greatest authority.

Andersen does not write about the sin of rebellion against God in the name of justice which appears in Bro's book but about rebellion of goodness. In *The Snow Queen* Gerda fights against evil with love showing kindness and strength in suffering. She does not succumb to anger and irritation. She is calm and trusts the Lord. His angels are her allies and defenders. Evil loses in confrontation with Gerda's love and suffering.

In *The Snow Queen* evil's face is visible and perceptible. The enemy is material here. It is personified by the queen of ice land. Gerda's suffering differs much from that of the Scholar. The girl is active and destroys the powers of darkness with her love and persistence. She steps forward and does not give up. The Scholar is passive, he does not resist but it is in this way that his strength and fight are expressed. Both of them look evil full in the face. Here, we observe two extremely different attitudes to evil, both of them guarantee salvation and triumph over evil.

In the fairy-tales discussed so far, i.e. in *The Snow Queen* and *The Shadow*, evil appears in the outer world but very often it lives inside us. Man should comprehend his sins and fight with penance. "Still, your work bears fruit, your cry is heard, your complaint is given ear to and your suffering is still recompensing and purifying." [9]

Karen, Inger and Ann Lisbeth, haughty and vain had lived in sin for a long time. They did not think either about penance or about people whom they had hurt. They did not try to purify their souls. But their sins were absolved after a long

[9] Thomas a Kempis, *Imitation of Christ*, chapter 1, 24,1.

time of penance. Every girl bears her cross. Inger, by standing as a living statue in hell and tormented by disgusting snakes; Karen, by being driven through fields by her beautiful red shoes; Ann Lisbeth haunted by the spirit of her dead son. They go through long sufferings. They regret their deeds but it is too little to bring them any comfort. They must compensate all the people, they had hurt. Inger, changed into a little grey bird, shares crumbs of bread with fellow-birds until she gains a loaf, i.e. the amount of bread she abused. Karen cuts off her legs together with the red shoes out of despair and then works hard as a servant until her humility compensates previous vanity. By the grace of God, she may enter the church. Ann Lisbeth keeps digging the grave for her dead son all the year long. He got drowned and his mother must compensate the harm she did him by leaving him alone as a child. When her penance ends, she dies in peace. Inger from the fairy-tale about *The Girl who Trod on the Bread*, Karen from *The Red Shoes* and Ann Lisbeth have fulfilled complete penance: its first stage – purification, and the second stage – compensation. Suffering is redemption. This aspect is most popular in Andersen's fairy-tales.

The task of this essay is to compare the notion of goodness and evil in Andersen's work with the philosophy of Bro. I have presented both features of evil in the context of theodicy and situations in those fairy-tales in which evil appears. The definition of the authors differs in some points. Bro regards evil as rebellion and Andersen as non-goodness.

Nevertheless both concentrate on human reaction to evil that is the essence of my considerations. I have found a lot of common elements in this field. The word **suffering** is treated as a reaction to evil by both Hans Christian Andersen and Bernard Bro. But here appears some differences. Suffering has three main aspects in *Fairy Tales and Stories:* 1) passiveness – standing harm with humidity, 2) good rebellion – which leads to victory and to the reward received still in the temporal world, 3) penance – which purifies the spirit and opens the gate to God's kingdom. Bernard Bro maintains that suffering itself is not a cure but a component of charity, which consists of: suffering in love of people and trust in God.

The religious denominations might be the reason for these differences. Andersen belonged to the Protestant church, Bro is a Catholic. Protestantism says that man's nature is sinful and redemption is of prime importance. On the other hand, Bro states that man has much freedom in the choice of the attitudes between charity and rebellion. Thus, if he wants to be redeemed, charity is the way. In spite of these differences suffering is the common denominator for both philosophies. "The Christian redemption is nothing else but deep forbearance, the real participation in love of God's heart, hurt by evil. Then we discover that being charitable is, besides curing, the greatest effect of the participation in God's suffering." [10]

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[10] Bernard Bro, *Power of Evil*, chapter 4.

It would be a mistake if we stated that Andersen underestimated the importance of evil but he enlarged the importance of redemption through suffering.

Such elements as: trust in God, belief (which is clearly seen in *The Bell*) lead to the lightness, to the nature, to God. Andersen shows two ways to salvation. The first way is very difficult, tangled, and leads through a deep and dark forest (chosen by the Poor Boy). Another one is easy and straight (selected by the Prince). Everyone should stand the suffering, given to him, and should stride forward with forbearance to salvation. No one can complain about his lot and demand justice but instead should stand difficulties with patience and in a way worthy of a Christian. Everything depends on God's will. Both the Poor Boy and the Prince trust in God. They will reach the aim. Thanks to their trust, they could comprehend the transcendential mystery of nature, i.e. God.

Bernard Bro and Hans Christian Andersen diverge from each other in one point. The reason may be the diverse character of their religion. The fairy-tales written by the Danish writer are characterized by a great individualism in suffering. All the protagonists of his fairy-tales redeem their own sins. Only in one story about *The Girl Who Trod on the Bread* the reader can see a woman who is sorry for Inger's sins and prays for her. The prayer helps Inger in doing her penance. The motive of co-suffering plays an important part in Bro's philosophy. He mentions Father Kolbe and Mother Teresa as an example of those who suffer together with others.

My essay started with a short presentation of good and evil in Bernard Bro's book and in Hans Christian Andersen's *Fairy Tales and Stories*. It has not been easy to reach to the Danish writer's ideas because they have been hidden under the cover of the plot of the stories. One could think that those two writers differ more than they have in common. The differences of religion, epoch and form of writing speak against any trials at comparing them. Yet, after taking the subject into the introductory consideration I found many common features as well. The most important feature, suffering, appears constantly in *The Power of Evil* and in *Fairy Tales and Stories*. It does not matter that the interpretation is different but both authors appreciate its value as a medicine for evil. Everything that stands in opposition to evil is good, so suffering is goodness itself. The writers admit that suffering is the most important factor in our life. Thanks to it, man gains strength to fight and defeat evil. Though Bernard Bro includes suffering as a subcategory in charity and Andersen treats it separately, both authors attribute power of purification and redemption to the phenomenon of suffering. Suffering ennobles man and raises him above sin.

Test Measuring of Tropes Understanding in Teaching English as a Second Language

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The study is a description of 50 test items measuring tropes understanding (metaphors, metonymies and similes). First, a number of paradigms on which the test is based, are analysed with respect to behaviours, styles and tropes. There is a table containing the discriminative force and difficulty of the items. The hypothesis that the test can be used for measuring general language skills becomes obvious from the correlations with marks in the language disciplines. The specifications of three-dimensional tables are suggested on which basis a big test battery could be created for much more complex research on tropes understanding in different sign systems.

Tropes play a key role with regard to language functioning and development. "Metaphor and simile are the most widely recognized figures of speech, being commonly used in many everyday varieties of language as well as in rhetorical and literary contexts. Some analysts consider metaphor, in particular, to be the core of linguistic (and especially poetic) creativity." (Crystal, 1988) The creation and use of tropes is one of the basic ways to language enrichment. For this reason in the process of operationalization of concept literacy in connection with its research, the ability of the students to comprehend the meaning of the text, interpreted by tropes, is one of its major components.

The importance of tropes naturally provokes the interest and involvement of scientists in various fields – philology, semiotics, poetics, communication theory, advertising and publicity. Good enough proof of this interest and involvement is Ivan Fonagy's research on metaphor in phonetics, Roland Barthes' in semiotics, Nalimov's on tropes, conveying scientific terminology, Jean Cohen's on metaphors and connotation in poetry. The close link between tropes and symbols expands the range of scientific disciplines that analyse metaphor and metonymy: psychoanalysis, religious history, ethnology. Recently, metaphor and metonymy have been scrupulously analysed with regard to advertising theory. This can be explained by the fact that the advertising of a wide range of goods, services and institutions is based on symbols. Metaphor and metonymy in that field have long exceeded the limits of the verbal sign system and become an intrinsic part of the image sign system, setting up a new paradigm of icon

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tropes, which more or less imitates the verbal tropes paradigm and follows some of the characteristics of their development. For example, clichés can already be discerned among icon tropes (see App. 3, Fig. 3, 4, 5, 6).

The great interest towards tropes provoked a series of psychometric experiments with regard to the different aspects of tropes.

Far greater results, however, can be achieved with regard to evaluation tests in education. In this field, and especially in language tests (both in the mother tongue and in foreign language study), the tests that evaluate the knowledge and the skills in using tropes are few, or, are sometimes totally lacking. A good example in this respect is the Standard Achievement Recording System (STARS), a series of criterion-referenced tests for reading and writing. For the "Sentence Skills" level of the test there are 11 subset series, and the last is "Figurative Language".

The aim of the present research is to make an attempt at elaborating a test that can evaluate the knowledge and skills of students studying English as a second language, especially with regard to tropes – metaphor, metonymy, simile.

The Method

Description of Tropes Paradigms

Different types of tropes classifications have been used as a basis for choosing the metaphor and metonymy items that were to be analysed. With regard to evaluating the degree of mastering a foreign language, the dichotomy between language-specific tropes and cross-languages ones is of primary importance. In this test emphasis is laid on tropes that are common both in English and in Bulgarian. Some tropes, completely absent in Bulgarian, are also included in the test (see App. 1): the 40th item: "everyone was just as nice as pie"; the 43rd item: "But now, you may ask, did the bellhops cope? It was a piece of cake"; the 49th item: "I'd been the cock of the walk ..."; and the 50th item: "I am as blue as the devil". The same is true about one of the omitted items: "She had all the physical equipment of the vamp but the spirit of the girl next door". This item, however, was not included due to its excessive difficulty and low discriminative index. One can also spot the difference between that item and the group of five quoted above in the fact that it is difficult to draw the general meaning from the words constituting the phrase in the omitted item. It is supposed that part of these tropes would have probably been naturalized in Bulgarian, and in other languages, too, (for example, the metaphor "the girl next door") since similar types of tropes have successfully become part of the Bulgarian language. There are such examples in the test: "she was a great hit"; "this largely blue-collar district".

Tropes classification within the text can be approached from another point of view, i.e., their distribution along the expectedness-unexpectedness line. Bearing in mind this classification, part of the metaphor and metonymy items form a group of expected (familiar) tropes, most of them typical of Bulgarian, too, since they have already acquired the status of fixed phraseological units, or are in the process of acquiring it. Some other tropes form the semantic group of the unexpected ones. This is typical of advertising text tropes, which seem to be the most active generators of new tropes.

Learning Assessments Paradigm Description

One of the most successful table's specification is done in "Handbook of Formative and Summative Evaluation". The author of the book, Rebecca M. Valette, in her chapter "Evaluation of Learning in a Second Language", proposes a large two-dimensional paradigm: the basic cognitive skills and affective domains are arranged along the horizontal line, and the basic linguistic parts are arranged along the vertical line. According to this paradigm, the test measures the knowledge and the abilities for understanding and conveying implicit (deep) meaning (Bloom et al., 1971). The stylistic aspect is not mentioned along the vertical column. Only three paragraphs are abstracted in it – vocabulary, grammar and spelling. That is why we consider it a better solution to use a more expanded scheme with regard to the vertical dimension. For instance, the table's specification included in Walter Moore's article "the Language Art" can suit this purpose well, (Bloom, et al., 1971) or the table's specification of the Standard Achievement Recording System (STARS). (Vincent, et al. 1983).

Description of the Styles That Include the Tropes Under Study

The texts containing the tropes are combined in such a way as to include the primary functional styles: prose, publicism, advertising, textbook's texts. The prose items are excerpts by Lawrence, Cartner, Sayers, Dreiser, Cronin, Maugham and others. The journalistic texts have been selected from recent issues of *The Times, Financial Times, The Guardian, Time Magazine, Newsweek, U.S. News and World Report.* The excerpts are on political, economical, artistic, military and historical topics. The advertisements include Xerox, Cannon, Hilton and Bank of America Travellers' Cheques ads.

The journalistic and advertising texts are about 30, i.e. they form the predominant part (App. 3). The effect was deliberately achieved since one of the most important test tasks was to apply it for contemporary English knowledge evaluation (the English of the eighties' and nineties' of the twentieth century, and especially to texts of high communicative dynamism – as in journalism and particularly in advertising.

Subjects

There were 124 students under study from 5 classes (second year of intensive learning of English). All classes contained roughly equal numbers of males and females with a slight predominance of female students.

Results

Pilot Study

The approbation of 60 items was made in the pilot study. Ten of them were omitted because of low discriminative index, very high or very low degree of difficulty, or bad working distractors. The necessary time for the test was 90 minutes or two academic hours.

Major Results

The degree of **difficulty** of the tasks varies from 0.37 to 0.79 (the percentage of correct answers), the average degree being 0.66.

The discriminative Index of the tasks, defined by the coefficient of the bisserial correlation between a task and the overall test score, varies from 0.35 to 1.02, the mean bisserial coefficient being .68 (Table 1. median – .67, mode – .68).

As for the definition of the tasks' internal consistency we have made use of the Kuder-Richardson formula (KR_{21}). The internal consistency rate of 0.94 of the test makes it possible to accept it as an adequate measure due to its **reliability** and **consistency**.

So far, the only data regarding the tests' validity are the correlation coefficient between the score and the annual marks in English of the students under study. The value of this coefficient is 0.70, and as a validity criterion it is not satisfactory, but we should take into consideration the fact that the annual marks themselves are not reliable enough criteria. There are still no objective and clearly defined criteria for the evaluation of the students' knowledge and skills in Bulgaria. That is why their evaluation often lacks reliability and validity. Unfortunately, we cannot make use of other subjective methods of knowledge evaluation (in English) since such standardized objective methodologies have not been adopted in Bulgaria.

The mean score rate of the excerpt under study is 33.28, the standard deviation being 11.76. The frequency distribution, though with a slight shift to the right, doesn't differ considerably from the normal distribution.

1	2	3	1	2	3	1	2	3
1	0.49	0.86	18	0.73	0.74	35	0.73	1.02
2	0.64	0.39	19	0.54	0.65	36	0.65	0.69
3	0.37	0.35	20	0.73	0.54	37	0.77	0.70
4	0.70	0.71	21	0.59	0.61	38	0.77	0.56
5	0.70	0.56	22	0.69	0.60	39	0.73	0.78
6	0.78	0.57	23	0.65	0.89	40	0.60	0.87
7	0.52	0.62	24	0.66	0.73	41	0.79	0.93
8	0.76	0.78	25	0.76	0.69	42	0.72	0.63
9	0.49	0.62	26	0.74	0.61	43	0.70	0.68
10	0.74	0.89	27	0.62	0.50	44	0.40	0.50
11	0.77	0.48	28	0.56	0.46	45	0.73	0.78
12	0.76	0.78	29	0.67	0.86	46	0.60	0.73
13	0.70	0.53	30	0.78	0.79	47	0.56	0.85
14	0.69	0.77	31	0.52	0.64	48	0.70	0.80
15	0.69	0.59	32	0.72	0.88	49	0.59	0.49
16	0.60	0.65	33	0.55	0.57	50	0.78	0.49
17	0.66	0.82	34	0.52	0.57			

1 – items
2 – difficulty of items
3 – discrimination index

Discussion

Two hypotheses were formulated at the onset of this research. The first one was about the girls' achievements and scores in the test of tropes understanding. It was considered that they would demonstrate higher degree of understanding, in comparison with the boys, due to their better developed image thinking. On exploring test scores with regard to sex, however, the boys demonstrated a slight priority over the girls, but since the point bisserial correlation index is not statistically meaningful, we cannot assert that there is a correlation between the sex of the students under study and their scores.

The second hypothesis concerned the positive correlation between the degree of tropes understanding and the general language intelligence. This hypothesis was completely proved especially by the fact that some statistically relevant indexes, such as the correlation between the test score and the school marks of the students under study in Bulgarian (0.49) and in Russian (0.69), and the general intelligence index of correlation with the marks in Maths (which, though lower, is statistically relevant too).

The idea behind this evaluation methodology was to establish a test series with a far greater number of items. It is obvious that in order to structure the tests well one should use more complex table specifications. The three dimensional table specifications turned out to be the best suited ones. The appendices (Fig 1 and 2 in App 2) include a few examples of three-dimensional table specifications that demonstrate more phenomena. The major feature groups are included in them – types of tropes and behaviours. The third dimension, however, acquires different variables. In the first case (Fig. 1) there is a classification of the major image types – photos, drawings, cartoons, diagrams, letter styles and image symbols (trade marks, coats of arms, emblems) – that can also bear trope (metamorphor, metonymy, etc.) interpretation. Research into the degree of understanding of icon tropes is of paramount importance since contemporary communication patterns are, to a great extent, based on images (a fact emphasized by all great mass media researchers of the 20th century).

In the second case, the three-dimensional table's specification variable can concern the style in which the tropes are used: in poetry, in prose, in journalism, in advertising, in science or in textbooks. (Fig. 2)

Special table's specifications can be used. Such classification can be implemented from a semiotic point of view: semantic trope variables would be placed along the horizontal axis; semantic ones would be placed along the vertical axis; and, pragmatic variables would be placed along the diagonal axis. Some special approaches can also be applied in tropes classification. Classical paradigms can be dropped and a new one can be drawn on the basis of trope functions, distance and tension (Morier, 1961), on the basis of the onthological metaphor (Lakoff, 1980), etc.

When defining the paradigms depending on the sign systems the understanding of which tropes will be explored it would be perhaps better to elaborate tables' specifications separately for the metaphors and the metonymies. As far as painting is concerned cubism can be defined as a sign system based on metonymy while surrealism is based on metaphor (Lodge, 1982). In a similar way we can define other phenomena as well, for instance, prose and poetry (Jakobson, 1973).

One of the test's major objectives is its international application with a view to comparing the knowledge and skills of students from different countries that study English as a second language. That is why everybody who is interested in this test can obtain it, the answers being translated into the respective languages. If no such translation is available, one can get a copy with the answers translated into English.

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Appendix 1

Examples of test items

ТЕСТ

2. Верният превод на изречението с подчертания израз е:

She was a great hit and then in quick succession he made her play Nora in *The Doll's House*, Ann in *Man and Superman*, and Hedda Gable.

а) Тя беше неповторима театрална актриса...;
б) Тя направи великолепна кариера в театъра...;
в) Тя направи поразяващо впечатление...

– – –

5. Верният превод на изречението с подчертания израз е:

The recession hit hard at this largely blue-collar district - one of the nation's most heavily populated areas.

а) Рецесията е много сериозна в района на заводите за шайби и обръчи...;
б) Рецесията е много сериозна в този работнически район...;
в) Рецесията е много сериозна в района на фабриките за яки...;

– – –

40. Верният превод на изречението с подчертания израз е:

Then they brought my clothes. Everyone was just as nice as pie.

а) Всички бяха много любезни;
б) Всички харесаха парчето сладко;
в) Всичко беше добре организирано.

– – –

43. Верният превод на изречението с подчертания израз е:

Last year 150 strong, news team and film crew with 5 tons of luggage checked into our 1007 room Great Wall Sheraton Hotel, in Beijing.
But how, you may ask, did the bellhops cope?
It was a piece of cake.

а) Това не беше съвсем проста работа;
б) Това ни струваше някои усилия;
в) Това беше лесна работа.

– – –

49. Верният превод на изречението с подчертания израз е:

I'd been cock of the walk in the old church school; but as soon as I went to the new school, I didn't amount to a hill of beans.

а) Аз бях един от уважаваните учители в старото църковно училище ...;
б) Аз бях важна личност в старото църковно училище ...;
в) Аз бях един от инициативните преподаватели в старото църковно училище ...

– – –

50. Верният превод на изречението с подчертания израз е:

I've been thinking of the past and I'm as blue as the devil.

а) Мислих си за миналото и си спомних не много приятни неща;
б) Мислих си за миналото и съм в ужасно настроение;
в) Мислих си за миналото и това ми се отрази на общото самочувствие.

Appendix 2

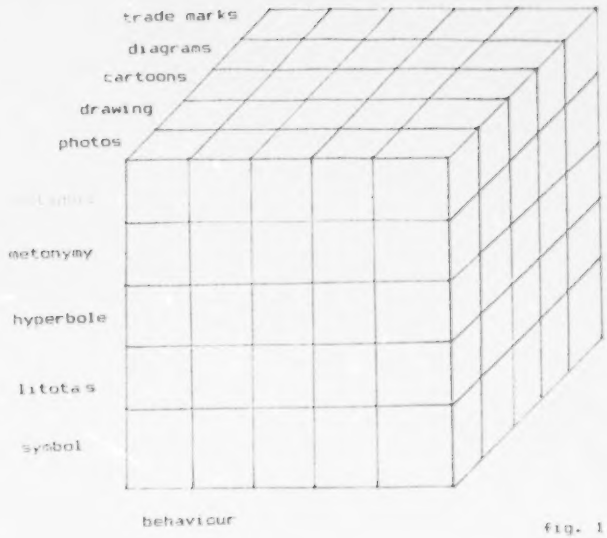


fig. 1

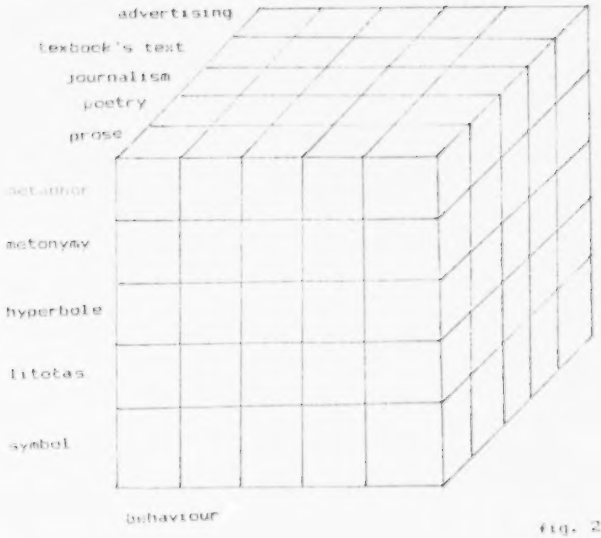
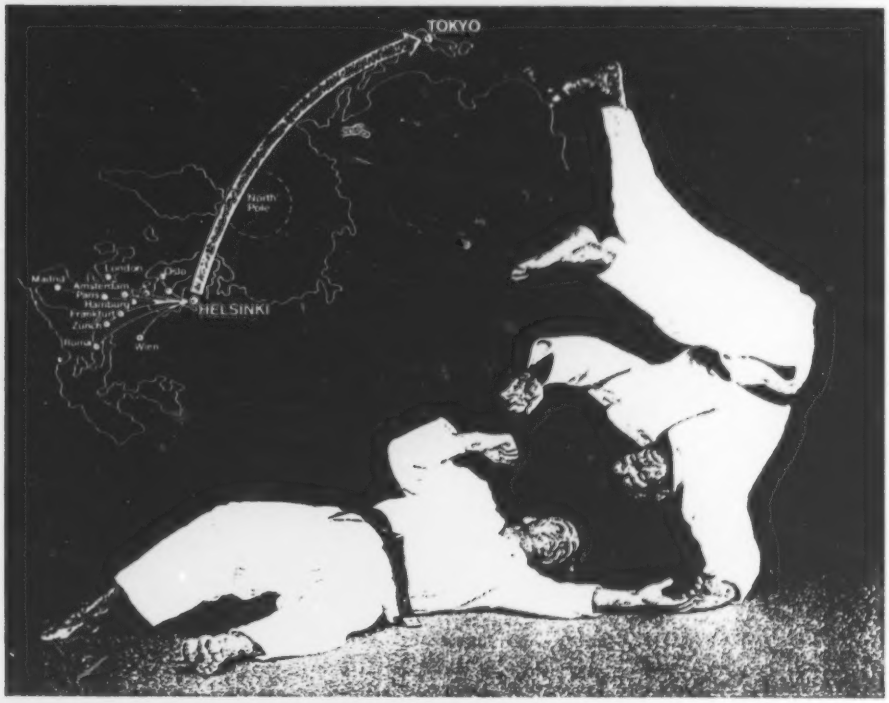


fig. 2

Appendix 3

To Japan, non-stop. Now!



Ippon it is.

The First and Only non-stop flight from Western Europe to Japan.

To mark our 60th anniversary and in honour of His Majesty Emperor Hirohito's birthday, we are inaugurating the first non-stop air service between Western Europe and Japan on 29.4.1983. The flight over the North Pole will take 13 hours, leaving Helsinki on Fridays and Tokyo on Sundays.

Our DC-10-30 ER aircraft contain First Class, Executive Class and Tourist Class sections. Finnish, Japanese and international cuisine, comfortable sleeperette seats (1st class) and attentive Finnish-Japanese cabin crew will ensure that your trip goes smoothly.

The new gateway to Japan is Helsinki, which has excellent connections with every other major European city. Transit facilities in Helsinki are efficient and uncomplicated, just like the whole flight. *Ippon* is what it is. A perfect performance.

一本

The motto we have chosen for our new route to Japan is *ippon*. We have chosen it because it means number one. And in judo it means a perfect performance.

FINNAIR

the art of flying since 1923

fig. 3
visual metonymy

BEST COPY AVAILABLE

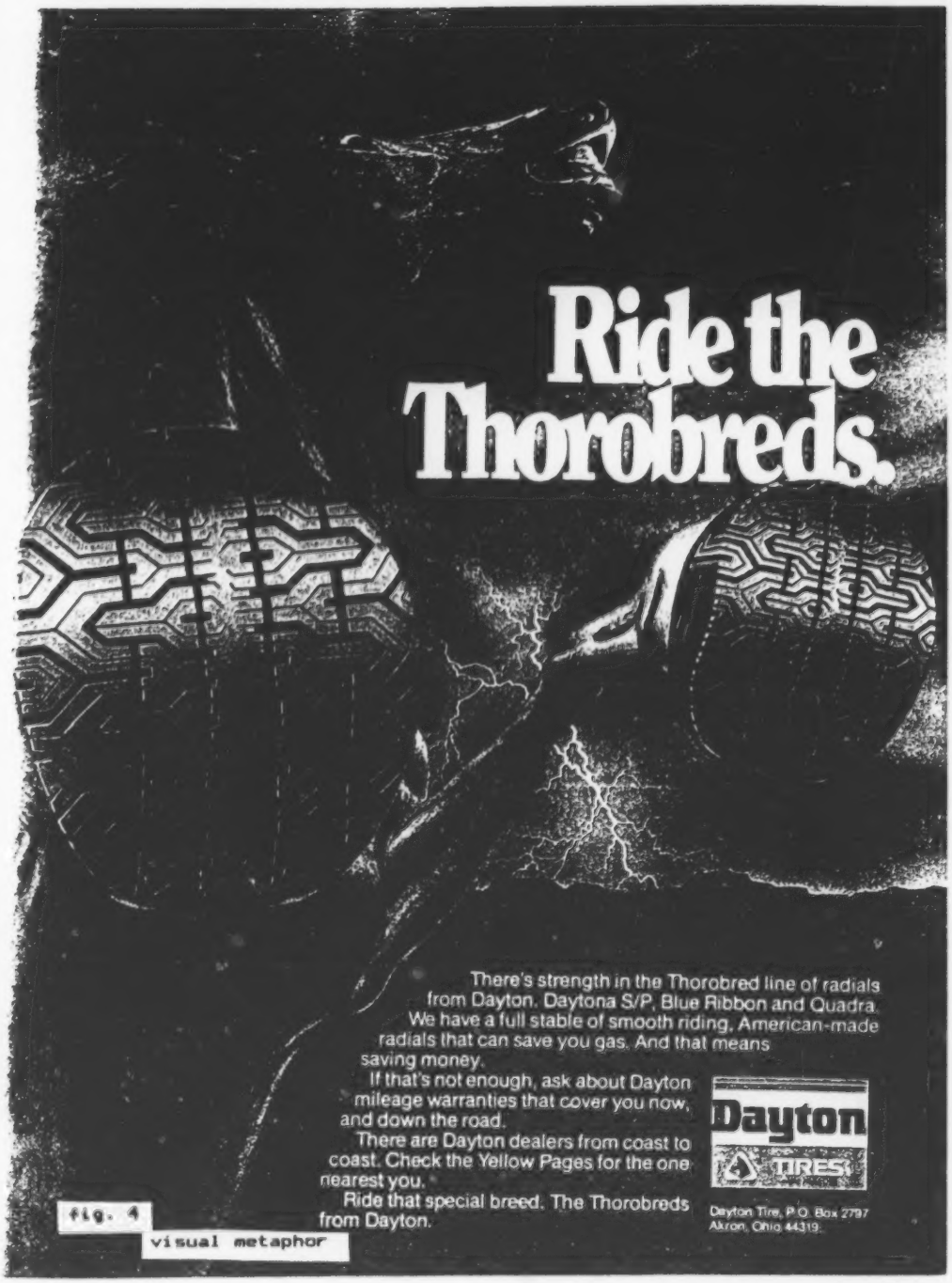
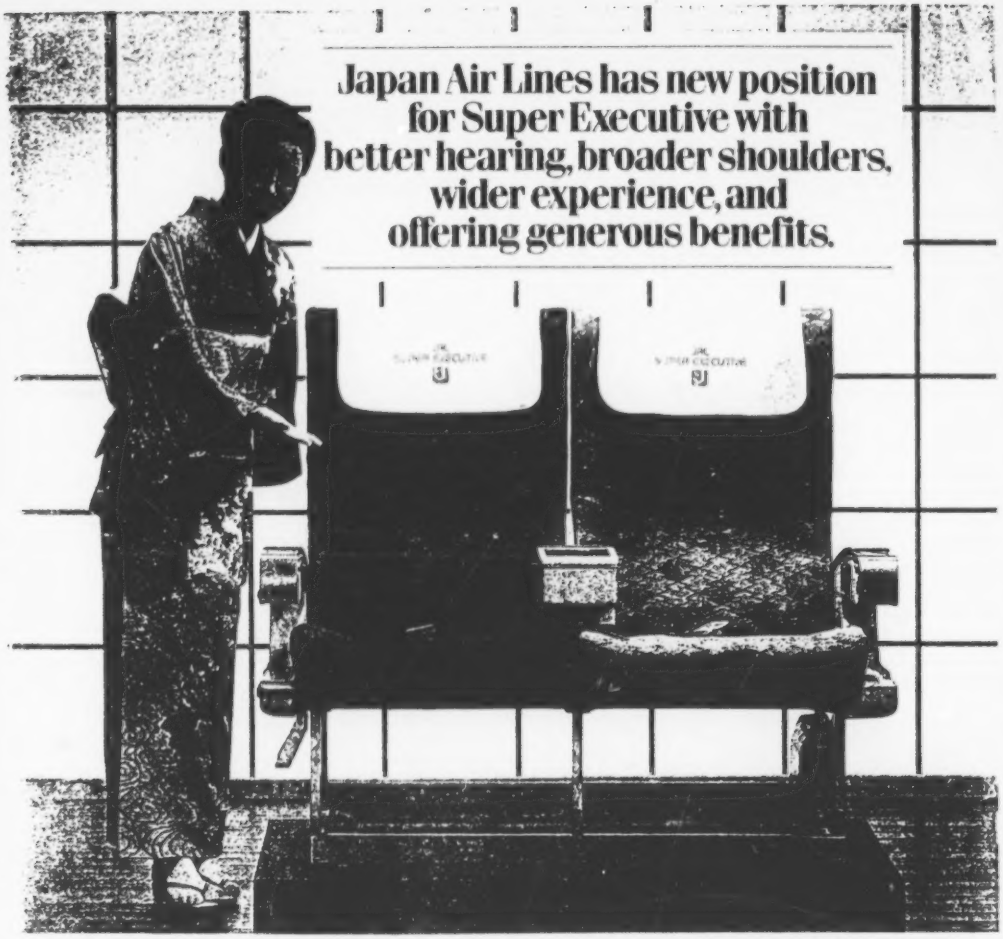

Ride the Thorobreds.
There's strength in the Thorobred line of radials from Dayton. Daytona S/P, Blue Ribbon and Quadra. We have a full stable of smooth riding, American-made radials that can save you gas. And that means saving money.
If that's not enough, ask about Dayton mileage warranties that cover you now, and down the road.
There are Dayton dealers from coast to coast. Check the Yellow Pages for the one nearest you.
Ride that special breed. The Thorobreds from Dayton.
Dayton
TIRES
Dayton Tire, P.O. Box 2797 Akron, Ohio 44319.

fig. 4

visual metaphor

BEST COPY AVAILABLE



Japan Air Lines has new position for Super Executive with better hearing, broader shoulders, wider experience, and offering generous benefits.

From April, Japan Air Lines introduce a completely unique class of travel on all our B747s.

Our new Super Executive 'J' Class makes any executive really feel like a super executive.

Because our exclusive 'J' Class seats are wider. So there's more shoulder room. There's more sitting room. There's more padding for a softer life (and deeper sleep). There's even a foot-rest and more space for luggage.

All because, in the rather prestigious Super Executive cabin, we've removed 20% of the seats. (There are only 8 abreast.)

Think of it as 20% more comfort, for a mere 5% 'premium' over our Executive Class.

Which has always been such a popular service, we're retaining it on our Polar and Trans-Siberian routes.

Making us the only airline to offer you the concerned service and attention to detail for which JAL is renowned, in a choice of four classes: First, Super Executive 'J' Class, Executive 'C' Class, as well as Economy.

New Super Executive 'J' Class. All these luxurious extras? Can you have heard correctly? Well, yes. Because the Super Executive hears everything more clearly on the latest electronic headphones.

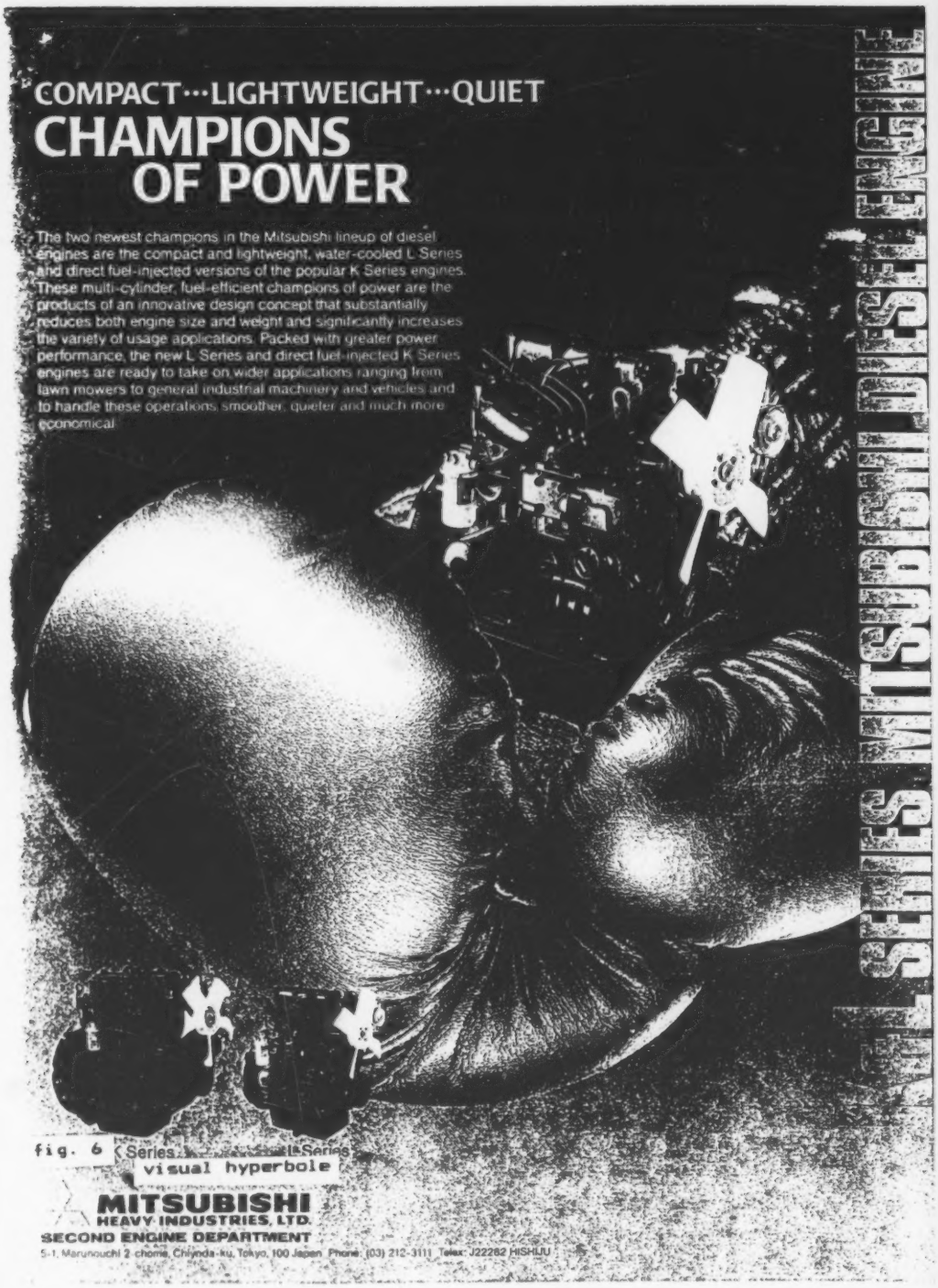
The longer the flight, the more the details matter.

JAPAN AIR LINES

fig. 5

Visual synecdoche

74 BEST COPY AVAILABLE


COMPACT···LIGHTWEIGHT···QUIET
CHAMPIONS OF POWER
The two newest champions in the Mitsubishi lineup of diesel engines are the compact and lightweight, water-cooled L Series and direct fuel-injected versions of the popular K Series engines. These multi-cylinder, fuel-efficient champions of power are the products of an innovative design concept that substantially reduces both engine size and weight and significantly increases the variety of usage applications. Packed with greater power performance, the new L Series and direct fuel-injected K Series engines are ready to take on wider applications ranging from lawn mowers to general industrial machinery and vehicles and to handle these operations smoother, quieter and much more economical.
MITSUBISHI DIESEL ENGINE
fig. 6 K Series L Series
visual hyperbole
MITSUBISHI
HEAVY INDUSTRIES, LTD.
SECOND ENGINE DEPARTMENT
5-1, Marunouchi 2 chome, Chiyoda-ku, Tokyo, 100 Japan Phone: (03) 212-3111 Telex: J22282 HISHIJU

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